CALIFORNIA JOBS FIRST REGIONAL ACTIVATION SEMICONDUCTOR PLAN:

Activation Plan: Strategy Overview Template

Topic	Sub-topic
Target Sector Strategy - Brief Overview	**a. Describe the proposed target sector strategy. *Regions may have already included this information in their Regional Plan Part 2 submission. If so, please summarize that content here.*** The Semiconductor sector represents a critical and strategically vital industry within California, with established hubs in Silicon Valley and increasingly, a recalibrated presence in Southern California, particularly Orange County. The passage of the CHIPS and Science Act in 2022, which subsequently awarded $26.9 million to a consortium of California universities (UC Irvine, USC, and others) to launch California DREAMS (California Defense Ready Electronics and Microdevices Superhub), underscores the national and state-level commitment to bolstering domestic semiconductor capabilities. Orange County's unique confluence of a robust legacy in aerospace and defense industries, coupled with its burgeoning technological ecosystem, positions it advantageously to significantly expand and strengthen its semiconductor footprint. This activation plan is meticulously designed to accelerate the growth and global competitiveness of Orange County's Semiconductor sector, thereby enhancing its capacity to attract, cultivate, and retain a highly skilled talent pool. **b. Explain why this sector was prioritized for immediate action.** The prioritization of the Semiconductor sector for immediate and sustained action within Orange County is predicated on compelling economic data and strategic alignment with regional and state objectives. In 2023, the broader Computer and

	Electronic Product Manufacturing sector, which encompasses semiconductor activities, generated an impressive $10.7 billion in Gross Regional Product (GRP), solidifying its position as the 9th largest contributor to the Orange County economy [1]. This substantial economic output highlights the sector's significant contribution to the region's overall prosperity. Orange County exhibits a remarkable concentration of employment within this sector, with an employment concentration ratio of 2.82 [1]. This metric signifies that employment in the semiconductor and related electronic product manufacturing industries is 2.82 times more concentrated in Orange County than the national average, indicating a specialized and deeply embedded industry presence. The sector currently supports over 34,000 jobs within Orange County, with an attractive average annual salary of $152,000 [1]. These figures not only demonstrate the sector's current scale but also its capacity to provide high-quality, well-paying employment opportunities, a core objective of the CA JOBS FIRST initiative. Orange County's historical ties to the defense and aerospace industries have fostered a robust ecosystem of chip manufacturers, including prominent legacy players such as Broadcom, Tower Semiconductor, and Skyworks Solutions [1]. This established foundation, combined with ongoing innovation in new materials and manufacturing processes, provides a fertile ground for continued growth. The region's strategic importance is further amplified by the increasing national emphasis on near-sourcing for national security reasons, making Orange County a pivotal location for domestic semiconductor production. This activation plan is intrinsically linked to the broader economic development priorities outlined in the Regional Plan Part II, specifically addressing the need for targeted sector growth that fosters quality jobs and equitable opportunities. The focus on the semiconductor industry directly contributes to the region's economic diversification goals by strengthening a high-value, innovation-driven sector. The

plan's emphasis on workforce development and community engagement directly aligns with the Regional Plan's objectives of building a skilled workforce and ensuring that economic growth benefits all segments of the community, particularly disinvested populations.

c. Provide an overview of tactics (minimum of 5) to focus implementation over 12-18 months (to be detailed in the "Tactical workplan template")

To achieve the strategic objectives of this activation plan, a minimum of five well-defined tactics will be implemented over the next 12-18 months. These tactics are designed to be comprehensive, addressing key aspects of sector growth, workforce development, innovation, and equitable access. They include:

1. **Enhanced Sector Leadership and Ecosystem Coordination:** Strengthening the organizational framework for guiding and supporting the semiconductor cluster.
2. **Targeted Workforce Development and Talent Pipeline Acceleration:** Aligning educational and training programs with industry needs to cultivate a robust talent pipeline.
3. **Strategic Expansion and Investment Attraction:** Proactively seeking and securing funding and partnerships to stimulate industry growth and infrastructure development.
4. **Inclusive Community Engagement and Equitable Access:** Ensuring that growth opportunities are accessible to and benefit disinvested communities within Orange County.
5. **Innovation and Sustainability Initiatives:** Fostering research and development in new materials and sustainable manufacturing practices. These tactics are designed to be interconnected and mutually reinforcing,

		creating a holistic approach to semiconductor sector development in Orange County. Each tactic will be detailed with specific program design factors, implementation teams, costs, potential metrics, and timelines in subsequent sections of this plan.

A Note on Disinvested Communities and Resident Culture, Race, and Ethnicity

The Collaborative recognizes the imperative to prioritize Orange County's disinvested communities as a central element of the Regional Investment Initiative, with special consideration for historically underrepresented racial, ethnic, and cultural groups within the Semiconductor sector. This focus is foundational to ensuring that sector growth equitably benefits all residents, particularly those from census tracts and populations that have faced systemic underinvestment, including Black, Latino, Asian and Pacific Islander, American Indian/Alaska Native, immigrant, and low-income communities.

To advance this commitment, the Semiconductor Activation Plan will integrate culturally responsive and community-driven strategies throughout its implementation. This includes developing targeted outreach and training programs that specifically engage residents from disinvested communities, supporting their pathways into quality semiconductor jobs, and fostering opportunities for diverse-owned small businesses within the sector supply chain.

The plan will leverage trusted partnerships with local organizations and leaders who are deeply rooted in these communities to ensure engagement is accessible, culturally relevant, and impactful. Outreach materials, events, and recruitment will be designed with linguistic and cultural competency in mind, removing barriers such as language, childcare, transportation, and digital access that have historically limited participation.

A key approach will be the establishment of a Community Advisory Working Group (CAWG) composed of representatives from disinvested communities. This group will play an active role in shaping program design, outreach, and evaluation to ensure initiatives are aligned with community needs and aspirations. In addition, the plan will encourage inclusive hiring and advancement practices across semiconductor companies, promoting diversity, equity, and inclusion at all levels of the workforce.

The plan also recognizes the importance of representation in innovation. By creating pathways for individuals from disinvested communities to participate in research, development, and leadership within the semiconductor ecosystem, the region will benefit from a broader range of perspectives and solutions.

Metrics and tasks will be established to track participation, outcomes, and leadership of individuals from disinvested communities, with data disaggregated by race, ethnicity, and geography. These metrics will include enrollment and completion rates in training programs, job placements, wage growth, and the number of diverse-owned businesses supported. By ensuring these outcomes are specific and measurable, the Collaborative will move beyond generic approaches to deliver meaningful, equitable, and inclusive results, addressing historical disparities and building a stronger, more resilient semiconductor sector for all of Orange County.	
Operating Structure to Organize and Execute	**a. Describe the organizational model for executing the sector strategy (including staff roles, operations, and governance model)** The execution of Orange County's Semiconductor sector strategy will rely on a collaborative and inclusive organizational model that integrates key stakeholders from across the region. The strategy will be overseen by a Semiconductor Sector Steering Committee, composed of representatives from public, private, and community organizations, tasked with setting priorities, monitoring progress, and ensuring alignment with regional economic and workforce development goals. This committee will work closely with Sector Investment Coordinators to ensure strategies are implemented effectively and resources are allocated efficiently, while also leveraging connections to state-level initiatives like California Jobs First. A Regional Implementation Team will manage day-to-day operations with a focus on facilitating partnerships and supporting stakeholders in executing projects. This team will prioritize building regional capacity by empowering existing organizations to lead 1. 2. 3. 4. 5. initiatives, rather than centralizing all functions within a single entity. Key operational components include: • **Dedicated Sector Initiative Leadership and Support Staff:** A dedicated team will be established to manage the day-to-day operations of the

	semiconductor cluster initiative. This team will be responsible for project management, communication, data collection, and reporting. ● **Semiconductor Leadership Group (SLG):** The SLG will be a cornerstone of the initiative, comprising C-level executives and experienced professionals from Orange County's semiconductor industry, including representatives from defense, communications, electronics, aerospace, advanced manufacturing, and AI sectors. The SLG will also include academic leaders from UC Irvine and California State University Fullerton, as well as representatives from innovation hubs. The selection process for SLG members will prioritize individuals with deep operational insights, strategic vision, and a commitment to regional economic development. The SLG will provide critical intelligence on ecosystem trends, infrastructure needs, environmental considerations, and market forecasts, informing strategic decisions and tactical implementations. ● **Formal Coordination and Communication Channels:** To ensure sustained coordination and integration, structured communication channels will be established between SLG members, public workforce institutions (e.g., community colleges, workforce boards), and representatives from disinvested communities. These channels will include regular coordination meetings, shared planning sessions, and the formation of a community advisory working group. This multi stakeholder approach will ensure that strategic sector initiatives are inclusive and responsive to community-driven needs and expectations. ● **Structured Feedback Loop:** Insights gathered from the SLG and direct employer engagement will be continuously integrated into adaptive program and funding decisions. A structured feedback loop, consisting of quarterly synthesis reports and continuous data monitoring, will ensure that ecosystem

partners remain agile and responsive to evolving sector needs. This iterative process will allow for real-time adjustments and optimization of strategies.

b. Identify regional partners for implementing tactics (including their roles and existing engagement with California Jobs First)

Successful implementation of this activation plan hinges on robust collaboration with a diverse array of regional partners. Suggested partners and their roles are below. This list is not comprehensive and is meant as a guide for the types of organizations that will be necessary for successful implementation.

Government Agencies and Economic Development Organizations

- **Orange County Business Council (OCBC):** Provide strategic guidance, advocate for semiconductor sector interests, promote workforce alignment, and support regional economic development efforts.
- **Orange Workforce Alliance (OWA):** Lead workforce initiatives, including pre-employment training, apprenticeships, upskilling, and job placement programs specifically aligned to semiconductor careers, with a focus on disinvested communities.
- **City Economic Development Offices (e.g., City of Garden Grove, Santa Ana, Anaheim, Irvine, etc.):** Facilitate local business incentives, streamline permitting, provide site selection assistance, and foster a business-friendly environment for semiconductor companies.

	∉ **California Office of the Small Business Advocate (CalOSBA):** Offer resources, technical assistance, and advocacy for small businesses and entrepreneurs statewide, including those in the semiconductor supply chain. ∉ **Governor's Office of Business and Economic Development (GO-Biz):** Provide state-level support, incentives, and regulatory navigation for semiconductor companies; connect regional partners to state and federal programs. ∉ **Other Government Agencies:** Collaborate on infrastructure, utilities, and community engagement; ensure alignment of local policies with sector growth objectives. ∉ **Educational Institutions and Workforce Training Providers** ∉ **4-Year Universities (e.g. UCI, CSUF, Chapman, Concordia, UMASS Global):** Conduct cutting-edge research and development, provide advanced workforce training, partner on technology transfer, and serve as anchors for semiconductor innovation. ∉ **Community Colleges (e.g., Fullerton College, Coastline College):** Deliver technical training, certifications, and associate degrees relevant to semiconductor manufacturing and engineering; operate as talent pipeline hubs. ∉ **Regional Occupational Programs (ROPs) and K-12 Career Pathways:** Provide early exposure to STEM and semiconductor-related careers through hands-on learning, career awareness programs, and technical education for high school students.

	∉ **California Community Colleges' Centers of Excellence:** Conduct labor market research and provide data-driven insights for sector-specific program development and curriculum alignment. ∉ **Adult Education Consortia:** Offer upskilling and reskilling opportunities to adult learners and career changers seeking entry into the semiconductor sector. ∉ **Faculty/Educator Professional Development Partners:** Support ongoing professional development to ensure educators remain current with semiconductor industry trends and technologies. ∉ **Workforce Centered Non-Profits (e.g United Way, Vital Link, etc.):** Advance equitable workforce pathways, provide wrap-around support services, and connect disinvested communities to semiconductor career opportunities. ∉ **Industry Associations and Chambers of Commerce** ∉ **SEMI (Semiconductor Equipment and Materials International):** Facilitate industry collaboration, share best practices, advocate for sector needs, and provide workforce and supply chain development programs. ∉ **California Manufacturing & Technology Association (CMTA):** Advocate for advanced manufacturing interests, provide policy updates, and connect regional partners to statewide initiatives. ∉ **Local and Regional Chambers of Commerce (e.g., North Orange County. Greater Irvine, etc):** Promote business growth, provide networking, connect businesses with resources, and support local economic development.

	∉ **Industry Councils and Advisory Groups:** Offer sector leadership, strategic direction, and employer engagement for the semiconductor ecosystem. ∉ **Small Business and Entrepreneurship Support Organizations** ∉ **Small Business Administration (SBA):** Support the growth of small and medium-sized enterprises through capital, contracts, and counseling services. ∉ **Small Business Development Centers (SBDC):** Provide technical assistance, mentorship, and business planning resources for startups and small businesses in the semiconductor supply chain. ∉ **Incubators and Accelerators (e.g., UCI Beall Applied Innovation, University Lab Partners, Octane):** Offer lab space, mentorship, technical support, and networking for early-stage semiconductor companies and entrepreneurs. ∉ **Tech Coast Angels and Cove Fund:** Provide early-stage venture capital and angel investment for semiconductor startups. ∉ **SCORE Orange County:** Deliver volunteer mentorship and business workshops tailored to the needs of new and emerging semiconductor businesses. ∉ **Veteran Business Outreach Center (VBOC):** Support veteran entrepreneurs and veteran-owned businesses in the semiconductor sector. ∉ **Orange County/Inland Empire Women's Business Center:** Offer resources and support for women entrepreneurs, including those entering the semiconductor industry.

- ## Community Based Organizations

  - **Community Based Organizations (e.g. OCAPICA, Latino Health Access, Family Assistance Ministries, Community Action Partnerships).** Trusted messengers with disinvested communities to actively recruit these communities to put them on a pathway to be eligible for careers in this sector.

  - **Environmental Organizations (e.g. Citizen's Climate Lobby, Climate Action Campaign, Coastal Corridor Alliance, Orange County Coast Keeper, Sunrise Movement Orange County).** Advise on how to develop the semiconductor industry while not creating significant damage to the environment.

- ## Labor Unions

  - **Communications Workers of America:** CWA members work in communications and information industries, the news media, the airlines, broadcast and cable television, public service, higher education and health care, manufacturing, in high tech and more. CWA will work to ensure fair wages, benefits, and safe workplace safety.

  - **LA/OC Building and Construction Trades:** Will work to ensure fair wages, benefits, and safe workplace safety in the construction of semiconductor facilities.

Existing engagement with California Jobs First will be leveraged and deepened through formal communication channels and collaborative planning sessions, ensuring alignment with statewide initiatives and maximizing resource utilization. The governance model will emphasize transparency, shared decision-making, and clear lines of communication among all partners to ensure collective impact and accountability.

Resourcing Across the Strategy	**a. Summarize total costs required to support strategy execution** The successful execution of this comprehensive Semiconductor Activation Plan necessitates a robust and diversified funding strategy. While specific detailed budget allocations for each tactic will be refined during the implementation phase, an initial assessment of the total costs required to support the strategy execution will encompass personnel, program development and delivery, infrastructure enhancements, marketing and outreach, and administrative overhead. These costs are estimated to be substantial, reflecting the ambitious goals of accelerating a critical industry sector. **b. Describe existing financing awarded/approved and associated sources, including utilization of Regional Investment Initiative Catalyst and Sector Coordination resources.** Existing financing awarded or approved will primarily stem from the CA JOBS FIRST initiative, which provides the foundational investment for this activation plan. This initial allocation is crucial for establishing the core operational framework, including dedicated leadership and staff, and for initiating key tactical work streams. The $26.9 million awarded to California DREAMS (California Defense Ready Electronics and Microdevices Superhub) under the CHIPS and Science Act, while not directly allocated to this specific Orange County initiative, signifies a broader state and federal commitment to semiconductor development that can be leveraged for future funding opportunities and collaborative projects [1]. This activation plan will strategically utilize resources from the Regional Investment Initiative (RII) Catalyst and Sector Coordination funds to maximize impact and ensure alignment with statewide objectives. These resources will be deployed to:

	• **Catalyze new partnerships and collaborations:** Funding will support convenings, workshops, and joint initiatives that bring together industry, academia, government, and community stakeholders to foster a collaborative ecosystem. • **Support data collection and analysis:** Resources will be allocated to conduct in depth market research, talent gap analyses, and economic impact studies specific to the Orange County semiconductor sector, providing data-driven insights for strategic decision-making. • **Facilitate technical assistance and capacity building:** Funds will be used to provide specialized expertise and training to local organizations and businesses, enhancing their capacity to participate in and benefit from the growing semiconductor industry. • **Strengthen communication and outreach:** Resources will support efforts to raise awareness about career opportunities in the semiconductor sector, particularly within disinvested communities, and to promote the overall objectives of the activation plan. • **Ensure alignment with state priorities:** The RII Catalyst and Sector Coordination resources will be used to ensure that all activities undertaken within this plan are directly aligned with the broader goals of the CA JOBS FIRST initiative and the state's economic development agenda. **c. Describe remaining funding required, potential sources that have been identified, and the general approach to securing investments** Despite existing allocations, significant additional funding will be required to fully realize the ambitious goals of this activation plan and to ensure its long-term sustainability. The

	remaining funding gaps will be addressed through a multi-pronged approach to securing investments from diverse sources: ● **Federal Grants and Programs:** Aggressively pursue federal funding opportunities, particularly those stemming from the CHIPS and Science Act, which aims to boost domestic semiconductor manufacturing and research. This includes grants from the Department of Commerce, Department of Defense, and other relevant agencies. The plan will specifically target programs that support workforce development, research and development, and infrastructure investment in the semiconductor sector. ● **State Programs and Initiatives:** Seek additional funding from California state programs that support economic development, workforce training, and innovation. This includes leveraging existing programs like the California Competes Tax Credit, Employment Training Panel (ETP) funds, and other incentives designed to attract and retain businesses in high-growth sectors. ● **Private Sector Investment:** Engage with semiconductor companies, venture capital firms, and private foundations with a vested interest in the growth of the Orange County semiconductor ecosystem. This will involve developing compelling proposals that demonstrate the return on investment for private partners, highlighting the region's strong talent pipeline, established infrastructure, and supportive business environment. ● **Philanthropic Support:** Explore partnerships with philanthropic organizations and family offices that are committed to fostering economic opportunity, STEM education, and community development in Orange County. This will involve aligning the plan's objectives with their funding priorities and demonstrating measurable social impact. ● **Public-Private Partnerships (PPPs):** Actively pursue the formation of formal PPPs, drawing inspiration from successful models such as the one in Austin, Texas, which

	leveraged collaborations between universities, local businesses, and government to attract major semiconductor consortia like MCC and SEMATECH. These partnerships can facilitate shared investment in research infrastructure, talent development programs, and advanced manufacturing facilities. ● **Local Government Contributions:** Collaborate with Orange County cities and the county government to secure local funding and in-kind support for initiatives that directly benefit their communities and align with their economic development goals. **General Approach to Securing Investments** The approach to securing investments will be proactive, strategic, and collaborative. Key elements include: ● **Developing a Strong Value Proposition:** Clearly articulate the unique strengths and competitive advantages of Orange County as a hub for semiconductor innovation, talent, and manufacturing. This includes highlighting the robust talent pipeline, established industry presence, and supportive ecosystem. ● **Targeted Outreach and Engagement:** Identify and cultivate relationships with potential funders and partners, tailoring proposals to their specific interests and investment criteria. This will involve direct outreach, participation in industry conferences, and hosting investor briefings. ● **Demonstrating Measurable Impact:** Develop clear metrics and reporting mechanisms to demonstrate the tangible economic and social impact of the activation plan, showcasing job creation, wage growth, and community benefits. This will build confidence among funders and facilitate future investment.

	• **Leveraging Existing Networks: Utilize existing networks of industry leaders, investors, and philanthropic organization**s to identify and access new funding opportunities. • **Advocacy and Policy Engagement:** Work with local, state, and federal policymakers to advocate for policies and funding mechanisms that support the growth of the semiconductor industry in Orange County and across California. • **Continuous Financial Planning:** Regularly review and update the financial plan, identifying emerging funding opportunities and adjusting strategies as needed to ensure the long-term financial viability of the activation plan.
Goals and Metrics Across the Strategy	**a. Identify measures for sector-level outcomes expected from interventions over the next 5-10 years (e.g., increases in target sector employment and number of quality jobs)** These long-term goals reflect the ultimate desired impact of the activation plan on the Orange County semiconductor ecosystem and its contribution to the broader regional economy: • **Increase in Semiconductor Sector GRP Contribution:** Aim to increase the Computer and Electronic Product Manufacturing sector's contribution to Orange County's Gross Regional Product (GRP) by a specific percentage (e.g., 15-20%) over the next 5-10 years, surpassing the current $10.7 billion. This will signify enhanced economic output and regional significance. • **Job Growth and Quality:** Achieve a significant increase in the total number of semiconductor-related jobs in Orange County (e.g., 20-25% growth from the current 34,000 jobs), with a continued focus on maintaining or increasing the

	average annual salary of $152,000. This ensures the creation of high-quality, sustainable employment opportunities. • **Increased Industry Investment:** Attract a substantial amount of new private and public investment into Orange County's semiconductor industry, including R&D, manufacturing facilities, and startup ventures. This will be measured by the total dollar amount of new capital invested. • **Enhanced Innovation Output:** Increase the number of semiconductor-related patents filed, research publications, and successful technology transfers from Orange County universities and research institutions to industry. This will demonstrate the region's growing capacity for innovation. • **Supply Chain Resilience:** Strengthen the local and regional semiconductor supply chain, reducing reliance on external vulnerabilities and fostering a more robust and integrated ecosystem. This can be measured by the number of new local suppliers engaged and the reduction in supply chain disruptions. • **Global Competitiveness:** Elevate Orange County's standing as a globally recognized hub for semiconductor design, engineering, and advanced manufacturing. This can be assessed through international partnerships, foreign direct investment, and global industry rankings. **b. Identify measures to track shorter-term progress towards desired sector-level outcomes (do not include measures linked to individual tactics, as those can be included in the tactical work plan template below)** These metrics will provide immediate feedback on the effectiveness of tactical implementations and allow for adaptive management throughout the plan's execution: • **Workforce Development Program Enrollment and Completion:** Track the number of individuals enrolled in and completing semiconductor-specific training programs,

	apprenticeships, and educational pathways (e.g., community college courses, university degrees). This will include disaggregated data for underrepresented populations. • **Job Placement Rates:** Monitor the percentage of program graduates who secure employment in the semiconductor sector within a specified timeframe (e.g., 6 months post-completion), along with their average starting wages. • **Industry Engagement in Workforce Development:** Measure the number of industry partners actively participating in curriculum development, mentorship programs, internships, and job fairs. This indicates the alignment between industry needs and talent development efforts. • **Semiconductor Leadership Group (SLG) Activity:** Track the frequency of SLG meetings, the number of actionable recommendations generated, and the implementation rate of those recommendations. This assesses the effectiveness of the strategic advisory body. • **Community Engagement Metrics:** Quantify outreach efforts to disinvested communities, including the number of community events held, participants engaged, and partnerships established with community-based organizations. This will also track the representation of disinvested community members in program enrollment and job placements. • **Funding Secured:** Track the amount of new grant funding, private investment, and other financial resources secured for semiconductor initiatives in Orange County on a quarterly or annual basis. • **Business Retention and Expansion (BRE) Interview Completion:** Measure the number of BRE interviews conducted with existing semiconductor companies,

	identifying their needs, challenges, and opportunities for growth within Orange County. ● **Policy and Regulatory Engagements:** Track the number of engagements with local, state, and federal policymakers to advocate for supportive policies and address regulatory barriers impacting the semiconductor industry. In alignment with the CA JOBS FIRST initiative's commitment to equity, specific metrics will be integrated to ensure that the benefits of sector growth are broadly shared, particularly with disinvested communities and underrepresented populations: ● **Representation in Talent Pipeline:** Track the demographic composition (race, ethnicity, gender, socioeconomic status) of individuals enrolling in and completing semiconductor-related education and training programs, with targets for increasing representation from disinvested communities. ● **Equitable Job Placement:** Monitor job placement rates and average wages for individuals from disinvested communities, ensuring they are comparable to those from other demographic groups. ● **Access to Resources:** Measure the participation of businesses and individuals from disinvested communities in programs offering technical assistance, funding opportunities, and business development support. ● **Community Advisory Group Participation:** Track the active involvement and influence of representatives from disinvested communities in the community advisory working group and other governance structures. **c. Describe expectations for reporting progress on measures** Regular reporting mechanisms will be established to ensure transparency and accountability:

	• **Quarterly Progress Reports:** Progress reports will be submitted to the Orange County Business Council and relevant state agencies, detailing progress against shorter-term metrics, highlighting achievements, and identifying challenges. • **Annual Impact Assessments:** Comprehensive annual reports will assess progress towards sector-level outcome measures, providing in-depth analysis of economic impact, job creation, and equity outcomes. • **Public Dashboards:** Consideration will be given to developing a public-facing dashboard to visualize key metrics and provide real-time updates on the semiconductor initiative's progress, fostering transparency and community engagement. **Connection Between Metrics and Strategic Objectives** Each metric is directly linked to the strategic objectives outlined in the Target Sector Strategy Overview. For example, increased GRP contribution and job growth directly align with the goal of accelerating the sector's economic impact. Workforce development metrics are tied to the objective of cultivating a robust talent pipeline. Equity-focused metrics ensure that the plan's implementation actively addresses disparities and promotes inclusive growth. This clear connection ensures that all activities contribute meaningfully to the overarching vision of a thriving and equitable semiconductor ecosystem in Orange County.
Dependencies and Challenges	a. **Describe key dependencies and risks to tactical work plan execution and how the strategy addresses them** The successful implementation of this Semiconductor Activation Plan is contingent upon navigating a complex landscape of dependencies and mitigating potential challenges.

	Proactive identification and strategic planning for these factors are crucial to ensure the resilience and adaptability of the initiative. **Key Dependencies** ● **Continued State and Federal Support:** The sustained commitment of funding and policy support from the CA JOBS FIRST initiative, the CHIPS and Science Act, and other relevant state and federal programs is a fundamental dependency. Fluctuations in political priorities or funding allocations could significantly impact the plan's trajectory. ● **Industry Engagement and Collaboration:** The active and sustained participation of Orange County's semiconductor companies, both large and small, is paramount. This includes their willingness to engage in workforce development initiatives, provide insights to the Semiconductor Leadership Group (SLG), and invest in local growth. Without strong industry buy-in, the plan's impact will be limited. ● **Educational Institution Responsiveness:** The ability of local universities, community colleges, and K-12 institutions to adapt curricula, develop new programs, and scale their offerings to meet the evolving talent needs of the semiconductor industry is critical. This requires ongoing communication and alignment between industry and academia. ● **Regional Partner Coordination:** Effective coordination among diverse regional partners, including economic development agencies, workforce boards, community organizations, and local governments, is essential. Siloed efforts or lack of communication could hinder progress and dilute impact. ● **Availability of Skilled Workforce:** The plan relies on the continued generation of a highly skilled workforce, particularly in STEM fields. While Orange County has a

	strong foundation, maintaining and expanding this talent pipeline in a competitive national and global market is a continuous dependency. ● **Infrastructure Development:** The availability of suitable infrastructure, including advanced manufacturing facilities, research labs, and reliable utilities (power, water), is a key dependency for attracting new investment and facilitating expansion within the sector. **Risks to Tactical Work Plan Execution** Several risks could impede the effective execution of the tactical work plan: ● **Economic Downturns:** Broader economic fluctuations or downturns could impact industry investment, consumer demand for semiconductor products, and overall job growth, potentially slowing the pace of the activation plan. ● **Talent Shortages and Competition:** Despite local efforts, a national or global shortage of specialized semiconductor talent could make it challenging to fill critical roles, leading to increased competition for skilled workers and potentially higher labor costs. ● **Regulatory and Permitting Hurdles:** Complex or protracted regulatory processes and permitting requirements for new or expanding manufacturing facilities could create significant delays and increase project costs. ● **Technological Obsolescence:** The rapid pace of technological change in the semiconductor industry means that skills and infrastructure can quickly become obsolete. Failure to adapt to new technologies could undermine the relevance and effectiveness of workforce development programs and research initiatives.

	• **Funding Instability:** Over-reliance on a single funding source or unexpected reductions in committed funding could jeopardize the continuity of programs and initiatives. • **Lack of Equity Integration:** Insufficient focus on engaging and benefiting disinvested communities could lead to inequitable outcomes, undermine community support, and fail to tap into diverse talent pools. • **Inter-regional Competition:** Other regions within California and across the U.S. are also actively pursuing semiconductor industry growth. Intense competition for talent, investment, and federal funding could divert resources and opportunities away from Orange County. **Mitigation Strategies** To address the identified dependencies and challenges, the following mitigation strategies will be implemented: • **Diversified Funding Portfolio:** Actively pursue a broad range of funding sources (federal, state, private, philanthropic) to reduce reliance on any single stream and create a more resilient financial foundation. • **Proactive Industry Engagement:** Establish formal and informal channels for continuous dialogue with industry leaders to anticipate talent needs, gather insights, and foster commitment to the plan's objectives. This includes regular surveys and direct outreach. • **Agile Curriculum Development:** Work closely with educational institutions to establish rapid response mechanisms for curriculum development and program adaptation, ensuring that training remains aligned with cutting-edge industry demands.

	• **Strengthened Cross-Sector Collaboration:** Implement robust inter-agency and inter-organizational coordination mechanisms, including shared planning platforms and regular working group meetings, to ensure seamless execution and avoid duplication of efforts. • **Targeted Talent Attraction and Retention:** Develop and implement strategies to not only cultivate local talent but also attract skilled professionals from outside the region, including marketing campaigns highlighting Orange County's quality of life and career opportunities. Support for immigration pathways for highly skilled workers will also be explored. • **Advocacy for Streamlined Regulations:** Engage with local and state policymakers to advocate for streamlined permitting processes and supportive regulatory frameworks that encourage semiconductor investment and expansion while upholding environmental standards. • **Continuous Environmental Scanning:** Regularly monitor economic indicators, technological advancements, and competitive landscapes to anticipate emerging challenges and adapt strategies accordingly. This includes subscribing to industry reports and participating in relevant forums. • **Dedicated Equity Working Group:** Establish a dedicated working group focused on equity integration, ensuring that all tactics are designed and implemented with an explicit focus on benefiting disinvested communities and promoting diversity, equity, and inclusion within the semiconductor workforce. • **Risk Management Framework:** Develop a formal risk management framework that includes regular risk assessments, contingency planning for identified risks, and clear protocols for responding to unforeseen challenges.

Activation Plan: Tactical Workplan Template

Strategy: This section provides a detailed breakdown of each tactic, outlining its purpose, goals, program design factors, implementation team and partners, estimated costs, potential metrics for assessing progress, specific tasks, responsible parties, and timelines. The tactics are designed to be interconnected and mutually reinforcing, contributing to the overarching goal of accelerating Orange County's semiconductor sector.			
Tactic & Overview	Task	Responsible Party	Timeline
Tactic 1: Enhanced Sector Leadership and Ecosystem Coordination a. Purpose: The primary purpose of this tactic is to establish a robust and dynamic leadership structure that effectively coordinates all stakeholders within Orange County's semiconductor ecosystem. The goals include fostering a shared vision for sector growth, facilitating strategic communication among industry, academia, government, and community partners, and ensuring that all initiatives are aligned with the needs of the semiconductor industry and the objectives of the CA JOBS FIRST program. This tactic aims to	**Task 1:** Formalize SLG Membership and Charter	SIC, Technical Support	Month 1-2
	Task 2: Establish Regular SLG Meeting Schedule	SIC, Technical Support	Month 2
	Task 3: Launch Centralized Information Hub	SIC, Technical Support	Month 3-4
	Task 4: Form Thematic Working Groups	SIC, Technical Support	Month 3-5
	Task 5: Implement Cross-Sector Communication Plan	SIC, Technical Support	Ongoing from Month 2

create a cohesive and responsive environment for semiconductor development. b. Program design: ● Formalization of the Semiconductor Leadership Group (SLG): Clearly define the composition, roles, and responsibilities of the SLG. The SLG will be comprised of Clevel executives and senior technical leaders from Orange County's prominent semiconductor companies (e.g., Broadcom, Skyworks Solutions, Tower Semiconductor, Microsemi Corporation), as well as representatives from emerging companies, defense contractors with significant chip operations (e.g., Raytheon, Anduril), and key academic institutions (e.g. UC Irvine and CSU Fullerton). Emphasis will be placed on ensuring diverse representation within the SLG, including leaders from companies actively engaged in new material innovation and sustainable manufacturing practices. ● Regular Convenings and Strategic Planning Sessions: Organize quarterly SL meetings to discuss industry trends,			

identify emerging challenges and opportunities, and provide strategic guidance for the activation plan. Annual strategic planning retreats will be held to refine long-term objectives and adapt to evolving market conditions. • Establishment of Thematic Working Groups: Create smaller, focused working groups under the SLG to address specific areas such as workforce development, supply chain resilience, infrastructure needs, and policy advocacy. These groups will conduct in-depth analyses and develop actionable recommendations. • Centralized Information Hub: Develop and maintain a digital platform or repository for sharing industry data, research findings, best practices, and funding opportunities among SLG members and key partners. This will ensure that all stakeholders have access to up-to-date information. • Cross-Sector Communication Protocols: Implement clear communication protocols and channels to facilitate seamless information exchange between			

the SLG, educational institutions, workforce development boards, and community organizations. This includes regular newsletters, dedicated communication platforms, and joint workshops. c. Team: ● SIC, Public Sector and Economic Development Organizations, Educational Institutions and Workforce Training Providers, Industry Associations and Chambers of Commerce, Small Business and Entrepreneurship Support Organizations, Community Based Organizations, and Labor Unions. d. Costs: ● Personnel: Dedicated staff time for program management and coordination (estimated $100,000 - $150,000 annually). ● SLG Operations: Meeting logistics, facilitation, and material preparation (estimated $20,000 - $30,000 annually). ● Information Hub Development & Maintenance: Initial platform setup and			

ongoing technical support (estimated $15,000 - $25,000 for setup, $5,000 annually for maintenance). ● Working Group Support: Resources for research, analysis, and report generation (estimated $10,000 - $15,000 annually). ● Communication & Outreach: Development of newsletters, communication materials, and joint workshop expenses (estimated $10,000 - $15,000 annually). ● Total Estimated Annual Cost for Tactic 1: $155,000 - $235,000 e. Potential metrics: ● Number of active SLG members and their attendance rates. ● Number of strategic recommendations generated by the SLG and working groups. ● Percentage of SLG recommendations adopted and implemented. ● Frequency of cross-sector communication events (e.g., joint meetings, workshops).			

• Number of unique users accessing the centralized information hub. • Qualitative feedback from partners on the effectiveness of coordination efforts			
Tactic 2: Targeted Workforce Development and Talent Pipeline Acceleration a. Purpose: This tactic aims to cultivate a robust and responsive talent pipeline for the Orange County semiconductor industry by aligning educational and training programs with current and future industry needs. The goals include increasing the number of skilled workers entering the semiconductor workforce, enhancing the relevance of existing training programs, and creating accessible pathways for individuals from diverse backgrounds, particularly disinvested communities, to enter high-paying semiconductor careers. b. Program design: • Skills Gap Analysis and Curriculum Alignment: Conduct a comprehensive, ongoing skills gap analysis in collaboration with the SLG and Orange County semiconductor companies. This	**Task 1:** Conduct Initial Skills Gap Analysis	SIC, Industry Associations and Chambers of Commerce, Public Sector and Economic Development Organizations.	Month 1-3
	Task 2: Convene Education-Industry Alignment Workshops	SIC, Public Sector and Economic Development Organizations, Educational Institutions and Workforce Training Providers.	Month 3-6, then semi-annually
	Task 3: Develop Apprenticeship/Internship Framework	SIC, Public Sector and Economic Development Organizations, Small Business and	Month 4-8

analysis will identify specific technical and soft skills required by the industry. Based on these findings, work with educational institutions (UC Irvine, CSU Fullerton, community colleges, ROP programs) to align and update their curricula, ensuring graduates possess the competencies demanded by employers. This will include integrating emerging technologies such as AI/ML in chip design, advanced packaging, and sustainable manufacturing practices. • Expansion of Apprenticeship and Internship Programs: Facilitate the development and expansion of registered apprenticeship programs and paid internship opportunities within Orange County semiconductor companies. This will involve working with industry partners to define apprenticeship standards, recruit participants, and secure funding for program implementation. Explore successful models from organizations like SEMI Foundation and adapt them for local needs.		Entrepreneurship Support Organizations, Labor Unions, Community Based Organizations.	
	Task 4: Launch Career Awareness Campaign	SIC, Educational Institutions and Workforce Training Providers, Community Based Organizations, and Labor Unions.	Month 6, ongoing
	Task 5: Implement Faculty Professional Development Program	Educational Institutions and Workforce Training Providers, Public Sector and Economic Development Organizations.	Month 7, ongoing
	Task 6: : Pilot Upskilling/Reskilling Programs	Public Sector and Economic Development Organizations,	Month 9, ongoing

• Career Awareness and Outreach Initiatives: Launch targeted career awareness campaigns in K-12 schools, community colleges, and disinvested communities to highlight the diverse and rewarding career opportunities within the semiconductor sector. This will include career fairs, industry speaker series, hands-on workshops, and development of accessible informational materials. Special emphasis will be placed on reaching underrepresented populations and showcasing role models from similar backgrounds. • Faculty Professional Development: Support professional development opportunities for educators at all levels (K-12, community college, university) to ensure they are up-to-date with the latest semiconductor technologies and industry practices. This could include industry externships, workshops led by SLG members, and access to specialized equipment. • Upskilling and Reskilling Programs: Develop and promote short-term, modular training programs for incumbent workers and individuals seeking to		Educational Institutions and Workforce Training Providers, Industry Associations and Chambers of Commerce, Community Based Organizations, and Labor Unions.	

transition into the semiconductor industry. These programs will focus on specific, in-demand skills and lead to industry-recognized certifications. c. Team: ● SIC, Public Sector and Economic Development Organizations, Educational Institutions and Workforce Training Providers, Industry Associations and Chambers of Commerce, Small Business and Entrepreneurship Support Organizations, Community Based Organizations, and Labor Unions. d. Costs: ● Skills Gap Analysis: Consultant fees for initial comprehensive analysis (estimated $30,000 - $50,000). ● Curriculum Development Support: Grants or stipends for faculty involved in curriculum revision (estimated $20,000 - $40,000 annually). ● Apprenticeship/Internship Program Support: Coordination staff, potential wage subsidies for small businesses, and			

program development (estimated $50,000 - $100,000 annually, depending on scale). ● Career Awareness & Outreach: Development of marketing materials, event costs, school visits (estimated $25,000 - $50,000 annually). Faculty Professional Development: Workshop costs, stipends for externships (estimated $15,000 - $30,000 annually). ● Upskilling/Reskilling Program Development: Curriculum design, instructor fees (estimated $20,000 - $40,000 annually). ● Total Estimated Annual Cost for Tactic 2: $160,000 - $310,000. e. Potential metrics: ● Number of educational programs updated or newly developed in alignment with industry needs. ● Number of students enrolled in and completing semiconductor-related programs (disaggregated by demographics).			

• Number of new apprenticeship and internship positions created and filled. • Job placement rates and average starting wages for program graduates. • Number of K-12 students reached through career awareness initiatives. • Number of educators participating in professional development activities. • Industry satisfaction with the quality of the talent pipeline (via surveys).			
Tactic 3: Strategic Expansion & Growth a. Purpose: This tactic focuses on proactively stimulating the growth and expansion of the Orange County semiconductor sector by attracting new investments, supporting existing companies in their scaling efforts, and addressing systemic barriers to growth. The goals include increasing the number of semiconductor companies in Orange County, facilitating the expansion of existing firms, and securing significant public and private funding to support infrastructure development and innovation.	**Task 1:** Develop Targeted Investment Attraction Strategy	Designated Coordinating Entity, OCBC, Public Sector and Economic Development Organizations	Month 1-3
	Task 2: Implement BRE Interview Program	Designated Coordinating Entity, OCBC, Public Sector and Economic Development Organizations	Month 2, ongoing

b. Program design: ● Investment Attraction and Business Development: Develop a targeted outreach strategy to attract new semiconductor companies to Orange County, particularly those involved in advanced manufacturing, R&D, and specialized chip design. This will involve showcasing Orange County's unique advantages, including its talent pool, established ecosystem, and quality of life. Conduct proactive business development efforts, including participation in national and international industry conferences and direct engagement with potential investors. ● Business Retention and Expansion (BRE) Program: Implement a robust BRE program specifically for existing Orange County semiconductor companies. Conduct regular interviews and surveys	**Task 3:** Host Funding and Incentive Workshops	Designated Coordinating Entity, OCBC, Public Sector and Economic Development Organizations	Month 4, then quarterly
	Task 4: Identify and Promote Strategic Sites	Designated Coordinating Entity, OCBC, Public Sector and Economic Development Organizations, Developers	Month 6, ongoing
	Task 5: Engage in Policy Advocacy	Designated Coordinating Entity, OCBC, Industry Associations	Ongoing from Month 3

with these firms to understand their needs, identify barriers to growth (e.g., talent gaps, regulatory challenges, infrastructure limitations), and connect them with relevant resources and incentives. Special attention will be given to companies located in or near disinvested communities (e.g., Santa Ana, Anaheim, Fullerton, Garden Grove) to ensure equitable growth. ● Access to Capital and Incentives: Facilitate access to various funding sources for semiconductor companies, including federal grants (e.g., CHIPS Act funding), state incentives (e.g., CA Go Biz incentives like tax exemptions, manufacturing tax credits, workforce development tax credits, CA Competes Incentive, R&D tax credits, Employment Training Panel resources), venture capital, and private equity. Provide technical assistance to companies in navigating application processes for these programs. ● Infrastructure and Site Development: Collaborate with local governments and private developers to identify and promote suitable sites for semiconductor	**Task 6:** : Expand Accelerator Programs for Semiconductor	Designated Coordinating Entity, OCBC, Public Sector and Economic Development Organizations, Small Business and Entrepreneurship Support Organizations	Month 5, ongoing

manufacturing and R&D facilities. Address infrastructure needs, including power, water, and specialized utilities, to support the growth of advanced manufacturing operations. Explore the feasibility of developing shared research and prototyping facilities. • Policy Advocacy and Regulatory Streamlining: Work with OCBC, CA Go Biz, SEMI, CMTA, and other relevant associations to analyze data and research related to regulatory barriers (e.g., local ordinances, state environmental regulations, utility stresses) that may impede semiconductor development. Advocate for legislative remedies or management strategies to remove or mitigate these barriers, ensuring a favorable operating environment for the industry. • Innovation Ecosystem Support: Expand existing accelerator programs to specifically seek, find, evaluate, assist, and develop semiconductor sector projects. This will involve providing mentorship, access to capital, and strategic guidance to early-stage semiconductor startups, accelerating			

their growth and integration into the Orange County ecosystem. c. Team: ● Lead Organization: A designated coordinating entity, in collaboration with the Orange County Business Council (OCBC). ● Key Partners: CA Go Biz, SEMI, CMTA, local city governments (especially those with significant semiconductor presence or potential), venture capital firms, private equity investors, real estate developers, and individual semiconductor companies. d. Costs: ● Business Development & Marketing: Travel, conference participation, marketing materials, and targeted campaigns (estimated $50,000 - $100,000 annually). ● BRE Program Management: Dedicated staff time for interviews, data analysis, and resource connection (estimated $40,000 - $70,000 annually).			

● Incentive Navigation Support: Consultant fees or dedicated staff for technical assistance to companies (estimated $30,000 - $50,000 annually). ● Infrastructure Feasibility Studies: Potential funding for preliminary studies on site development or shared facilities (estimated $20,000 - $40,000 per study, as needed). ● Policy Advocacy: Research, lobbying efforts, and coalition building (estimated $20,000 - $30,000 annually). ● Accelerator Program Expansion: Additional resources for semiconductor-specific mentorship, events, and seed funding (estimated $50,000 - $100,000 annually). ● Total Estimated Annual Cost for Tactic 3: $210,000 - $390,000. e. Potential metrics: ● Number of new semiconductor companies attracted to Orange County.			

• Number of existing semiconductor companies reporting expansion plans or increased investment. • Total amount of new private and public investment secured for the Orange County semiconductor sector. • Number of companies assisted in accessing state and federal incentives. • Number of policy changes or regulatory improvements enacted to support the industry. • Number of semiconductor startups supported through accelerator programs. • Job creation attributed to new company attraction and existing company expansion.			
Tactic 4 Inclusive Community Engagement and Equitable Access a. Purpose:	**Task 1:** Establish Community Advisory Working Group	SIC	Month 1-3
	Task 2: Develop Targeted Outreach Plan	SIC, Community Based Organizations, Workforce Centered Non-	Month 2-4

Inclusive Community Engagement and Equitable Access b. Program design: ● Community Advisory Working Group (CAWG): Establish a formal CAWG composed of trusted leaders and representatives from disinvested communities across Orange County (e.g., Santa Ana, Anaheim, Garden Grove, Fullerton). This group will provide direct input on program design, outreach strategies, and ensure that initiatives are culturally competent and responsive to community needs. The CAWG will serve as a critical feedback loop to the SLG and the designated coordinating entity. ● Targeted Outreach and Recruitment: Develop and implement targeted outreach and recruitment strategies specifically designed to reach individuals from disinvested communities. This will involve partnering with community-based organizations, faith-based groups, local schools, and social service agencies to disseminate information about semiconductor career pathways, training programs, and job opportunities.		Profits, and Labor Unions.	
	Task 3: Map Wrap-around Support Services	Public Sector and Economic Development Organizations, Community Based Organizations, Workforce Centered Non-Profits, and Labor Unions.	Month 3-5
	Task 4: Pilot Pre-Apprenticeship/Bridge Programs	Educational Institutions and Workforce Training Providers, Community Based Organizations, Public Sector and Economic Development Organizations, and Labor Unions.	Month 5-9
	Task 5: Evaluate Community-Based Training Hub Feasibility	SIC, Public Sector and Economic Development Organizations,	Month 7-10

Outreach materials will be developed in multiple languages and formats to ensure accessibility. ● Wrap-around Support Services: Collaborate with existing community resources to provide comprehensive wrap-around support services for individuals from disinvested communities participating in semiconductor training and employment programs. This may include assistance with transportation, childcare, digital literacy, financial literacy, and mentorship, addressing common barriers to entry and retention. ● Pre-Apprenticeship and Bridge Programs: Develop and support pre apprenticeship and bridge programs that prepare individuals with foundational skills and knowledge necessary to enter formal semiconductor apprenticeship or training programs. These programs will focus on basic math, science, and technical skills, as well as workplace readiness. ● Equity-Focused Employer Engagement: Work with semiconductor companies to implement diversity, equity, and inclusion		Community Based Organizations, Workforce Centered Non-Profits, and Labor Unions.	

(DEI) best practices in their hiring, training, and retention strategies. This includes promoting fair chance hiring, unconscious bias training, and creating inclusive workplace cultures. Encourage companies to establish mentorship programs for new hires from underrepresented backgrounds. ● Community-Based Training Hubs: Explore the feasibility of establishing community-based training hubs or satellite campuses in disinvested communities, bringing semiconductor-related training and resources directly to residents. c. Team: ● SIC, Public Sector and Economic Development Organizations, Educational Institutions and Workforce Training Providers, Industry Associations and Chambers of Commerce, Community Based Organizations, Labor Unions. d. Costs: ● CAWG Operations: Stipends for community leaders, meeting logistics,			

and facilitation (estimated $25,000 - $40,000 annually). • Targeted Outreach & Recruitment: Development of culturally relevant materials, event costs, community liaison staff (estimated $30,000 - $60,000 annually). • Wrap-around Support Services: Funding for direct support (e.g., transportation vouchers, childcare subsidies) or partnerships with service providers (estimated $50,000 - $100,000 annually, depending on need). • Pre-Apprenticeship/Bridge Programs: Curriculum development, instructor fees, materials (estimated $40,000 - $80,000 annually). • DEI Training & Consulting for Employers: Subsidies for companies to access DEI expertise (estimated $20,000 - $40,000 annually). • Community-Based Training Hub Feasibility: Initial study and potential pilot program costs (estimated $15,000 - $30,000).			

● Total Estimated Annual Cost for Tactic 4: $180,000 - $350,000. e. Potential metrics: ● Number of active CAWG members and frequency of meetings. ● Number of individuals from disinvested communities participating in outreach events. ● Enrollment and completion rates of individuals from disinvested communities in semiconductor training programs (disaggregated data). ● Job placement rates and average wages for individuals from disinvested communities in semiconductor roles. ● Number of companies implementing DEI best practices. Number of partnerships established with community-based organizations. ● Qualitative feedback from community members on program accessibility and effectiveness.			

Tactic 5: Innovation and Sustainability Initiatives a. Purpose: This tactic aims to foster a culture of continuous innovation and promote sustainable practices within the Orange County semiconductor industry. The goals include stimulating research and development in cutting-edge materials and manufacturing processes, encouraging the adoption of environmentally responsible practices, and positioning Orange County as a leader in green semiconductor technologies. This tactic will also support the development of new intellectual property and the commercialization of innovative solutions. b. Program design: • Research and Development (R&D) Collaboration Hubs: Facilitate the creation of collaborative R&D hubs or consortia that bring together industry, university researchers (e.g., UC Irvine, CSU Fullerton), and national labs to address key technological challenges and explore new frontiers in semiconductor materials, design, and manufacturing. Focus areas could	**Task 1:** Establish R&D Collaboration Framework	SIC, Educational Institutions and Workforce Training Providers, Small Business and Entrepreneurship Support Organizations and Community Based Organizations.	Month 1-4
	Task 2: Develop Sustainable Manufacturing Toolkit	SIC, Public Sector and Economic Development Organizations, Small Business and Entrepreneurship Support Organizations Industry Associations and Chambers of Commerce, and Community Based Organizations.	Month 3-6
	Task 3: Launch Annual Innovation Challenge	SIC, Educational Institutions and	Month 5, annual

include advanced packaging, wide bandgap semiconductors, quantum computing components, and AI-driven chip design. • Sustainable Manufacturing Best Practices: Promote the adoption of sustainable manufacturing practices within Orange County semiconductor companies. This will involve developing and disseminating best practice guides, organizing workshops on energy efficiency, water conservation, waste reduction, and the use of eco friendly materials. Explore incentives for companies to invest in green technologies and processes. • Innovation Challenges and Seed Funding: Launch innovation challenges or hackathons focused on solving specific industry problems related to sustainability or next-generation semiconductor technologies. Provide seed funding or connect winning teams with venture capital and angel investors to help commercialize their solutions.		Workforce Training Providers, Industry Associations and Chambers of Commerce, Small Business and Entrepreneurship Support Organizations and Community Based Organizations.	
	Task 4: Provide IP and Tech Transfer Workshops	SIC, Educational Institutions and Workforce Training Providers, Small Business and Entrepreneurship Support Organizations	Month 6, semi-annually
	Task 5: Integrate Green Skills into Workforce Programs	SIC, Educational Institutions and Workforce Training Providers, and Community Based Organizations	Ongoing from Month 7

● Intellectual Property (IP) and Technology Transfer Support: Provide resources and guidance to companies and researchers on intellectual property protection and technology transfer processes. Facilitate partnerships between universities and industry to accelerate the commercialization of research breakthroughs. ● Green Workforce Development: Integrate sustainability principles and green technology skills into existing and new workforce development programs (Tactic 2). This will ensure that the future semiconductor workforce is equipped with the knowledge and skills to implement and manage sustainable operations. ● Policy Advocacy for Green Initiatives: Advocate for local and state policies that support sustainable manufacturing, incentivize green technology adoption, and promote responsible resource management within the semiconductor industry. c. Team:	**Task 6:** Advocate for Green Policy Initiatives	SIC, Industry Associations and Chambers of Commerce, Community Based Organizations	Ongoing from Month 8

● SIC, Public Sector and Economic Development Organizations, Educational Institutions and Workforce Training Providers, Industry Associations and Chambers of Commerce, Small Business and Entrepreneurship Support Organizations, Community Based Organizations. d. Costs: ● R&D Collaboration Hub Support: Funding for joint research projects, shared equipment access, and administrative support (estimated $75,000 - $150,000 annually). ● Sustainable Practices Program: Development of guides, workshop costs, and expert consultation (estimated $30,000 - $60,000 annually). ● Innovation Challenges/Seed Funding: Prize money, administrative costs, and potential seed investments (estimated $50,000 - $100,000 annually).			

● IP/Tech Transfer Support: Legal consultation, workshop costs (estimated $20,000 - $40,000 annually). ● Green Workforce Integration: Curriculum development support, faculty training (estimated $15,000 - $30,000 annually). ● Policy Advocacy: Research and outreach efforts (estimated $10,000 - $20,000 annually). ● Total Estimated Annual Cost for Tactic 5: $200,000 - $400,000. e. Potential metrics: ● Number of collaborative R&D projects initiated. ● Number of companies adopting new sustainable manufacturing practices. ● Reduction in energy consumption, water usage, or waste generation by participating companies. ● Number of patents filed or licenses granted for semiconductor-related innovations.			

• Number of startups launched from innovation challenges. • Number of individuals trained in green semiconductor technologies. • Amount of private investment attracted to green semiconductor initiatives.			

References • • • • [1] Orange County Semiconductor Industry Data and Context. (2025). [Internal Document/Synthesized Data]. /home/ubuntu/oc_semiconductor_data.m