



**THRIVE**  
Inland SoCal

# California Jobs First Regional Plan Part II

January 31, 2025



We want to express our deepest gratitude to our entire Thrive Inland SoCal Collaborative, our Convener team, our researchers from: University of California Riverside, Brookings Institute, Center for Sustainable Energy, and Loma Linda University. Your dedication, commitment, and expertise made this all possible. Our hope is that we continue to walk together in equity, empathy, and inclusivity to grow a resilient and diverse region where all can **THRIVE!**

Co-Conveners



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# Introduction

Over the past 18 months, stakeholders throughout Riverside and San Bernardino Counties came together to form Thrive Inland SoCal, a regional collaborative dedicated to advancing inclusive economic development. Organized in response to the statewide California Jobs First initiative, Thrive Inland SoCal is working to build a more competitive, more resilient, and more inclusive regional economy that gives all residents a fair chance to build a better life for themselves and their families.

The California Jobs First (CJF) initiative provided a process for thinking through how to grow the number of quality jobs in the region, get more workers on pathways to access quality jobs, and help more families in Inland SoCal achieve financial stability.

## What is California Jobs First?

The California Jobs First (CJF) Regional Investment Initiative (formerly known as the Community Economic Resilience Fund) is a signature effort to cultivate strong, equitable, and sustainable regional economies throughout the state. Enacted in 2021 in the wake of the COVID-19 pandemic, this initiative is administered by the Governor’s Office of Business and Economic Development (GO-Biz) and the California Labor & Workforce Development Agency (LWDA).

CJF organized the state into 13 distinct economic regions and tasked each with the development of a comprehensive, integrating regional economic development strategy focused on generating quality jobs and fostering equitable prosperity, while considering climate and health imperatives of transitioning to a carbon-neutral economy. Each region established governance structures reflecting the diversity of its population, conducted a community-informed assessment of the regional economy, and identified concrete strategies and tactics to achieve CJF’s goals.

Following the completion of the strategy development phase in late summer 2024, the 13 regions will compete for state funding to support the implementation of their strategic plans, but also need to pursue other public, private, and philanthropic resources to execute on agreed strategies.

Thrive Inland SoCal used the CJF process to develop a roadmap that is anchored in the region’s distinctive economic strengths. It conducted in-depth research and extensive community engagement to better understand emerging opportunities and persistent challenges, as well as the actions and investments needed to help the region deliver on its potential. The Thrive research team also spoke with many individuals from private-sector firms, public-sector entities, and institutions of higher education. The plan builds on these insights to highlight new possibilities for the region, as well as reaffirm existing activities and ideas that require scale and execution. The proposed actions will guide Thrive’s efforts to boost opportunity industries needed to diversify the economy and overcome the deficit in quality jobs available for residents, but also ensure workers have the support needed to take advantage of those jobs and build wealth to get ahead.

The community-driven nature of the CJF process has resulted in a report that differs significantly from Comprehensive Economic Development Strategies (CEDs) and other economic planning efforts in its heavy emphasis on community concerns and priorities. Focused

regional industry outreach to inform ongoing CJF work took place in autumn 2024 and winter 2025. Continued engagement with these actors will be critical to growing a stronger and more inclusive regional economy.

## What is Thrive Inland SoCal?

Thrive Inland SoCal is a regional inclusive economic development collaborative composed of a wide range of stakeholder groups from Riverside and San Bernardino Counties. It is led by a broadly representative governance framework involving multiple committees, an Inclusive Planning Council, and six subregional tables. Inland Economic Growth and Opportunity (IEGO) and the Inland Empire Labor Institute (IELI) serve as co-conveners for this effort, with the Inland Empire Community Foundation (IECF) acting as fiscal agent.

Thrive Inland SoCal recognizes the value of giving all residents a say in shaping the region's collective economic future and addressing historical inequities. It envisions a region where everyone has access to the resources and opportunities that they need to thrive, regardless of their background or life circumstances. It is committed to closing equity gaps and dismantling systemic barriers that prevent individuals and communities from realizing their full potential.

The collaborative's primary goal is to cultivate a region where all communities prosper from economic growth and every resident has the opportunity to live a healthy, high-quality life. The collaborative established governance principles to guide their work:

- A cooperative culture anchored in a spirit of mutual respect and a desire to build consensus around solutions
- Data-driven, inclusive decision making
- Accountability to one another for the outcomes of decisions
- Encouraging power-sharing and anti-racist approaches that help address long-standing non-economic barriers to prosperity
- Promoting considerations of equity and accessibility in business operations and hiring practices
- Prioritizing options that help residents build wealth, particularly those from historically marginalized communities

Through the CJF process, Thrive Inland SoCal has taken concrete steps to:

- Assess the regional economy and identify high-potential industry clusters, core challenges, and opportunities for future growth
- Invite community members into the regional economic strategy development process and incorporate their insights, priorities, and concerns into strategy design
- Develop strategies that strengthen those industry clusters with the greatest potential for increasing the number of quality jobs in the region
- Propose mechanisms for connecting more residents to pathways into quality jobs, entrepreneurship, small business ownership, and other opportunities for wealth-building.

# The evolution of regional economic development

For much of the twentieth century, most Americans earned more money than their parents. Among those born in 1940, some 90 percent out-earned their parents (after adjusting for inflation). But for Americans born in the 1980s, only half earn more than their parents.<sup>1</sup> One of the main reasons for this stems from a shortage of quality jobs.

## What is a quality job?

A quality job can be defined in many different ways (see "*The critical role of quality jobs*" on page 10). At one end of the spectrum, it simply provides enough income for a family to cover basic needs each month. At the other, it offers an individual worker voice and personal satisfaction in what they do.

This report uses a method called Opportunity Industries analysis, which was developed by researchers at the Brookings Institution to figure out which industries are most likely to create a large number of quality jobs in a particular location. This methodology relies on data collected by the U.S. Census Bureau, which ensures that measurements are consistent from one place to the next.

The Opportunity Industries approach provides a more detailed view of job quality and career advancement across different sectors, occupations, and demographics. Insights from this analysis can help Inland SoCal focus its efforts on sectors with the greatest potential for quality job creation and get more residents on well-supported pathways into quality jobs in the region.

According to the Opportunity Industries definition, a quality job must:

- Pay enough over the course of a year to cover a family's basic needs and leave some extra money left over for emergencies and savings
- Include health insurance (which tends to mean that the job offers other benefits as well)
- Provide a level of financial stability over the next ten years (either by continuing to be a quality job or by providing a path to a different quality job).

By examining how workers move among occupations and industries over time, Opportunity Industries analysis also identifies promising jobs—those positions that don't meet all three of these criteria but can still help a worker move into a quality job within the next decade. Attention to promising jobs reflects the fact that many entry-level positions do not meet the definition of a quality job but can play an important role in helping workers gain the skills and experience they need to advance in their careers. Promising jobs also play a bigger role in people's career progression today given that most workers change occupations and industries several times over the course of their working lives (in contrast to decades past when workers were more likely to follow a defined career trajectory within a particular industry). Quality jobs and promising jobs together are referred to as opportunity jobs.

<sup>1</sup> Raj Chetty et al., "The Fading American Dream: Trends in Absolute Economic Mobility Since 1940," *Science* 356(6336)(2017): 398-406. Available at <https://opportunityinsights.org/paper/the-fading-american-dream/> (accessed July 26, 2024).

Those jobs that do not meet the criteria for either are classified as other jobs. Although these jobs do not meet the wage, benefit, and stability standards of opportunity jobs, workers who hold these positions are vitally important to the regional economy and provide critically needed services such as agricultural labor, childcare, and eldercare. Given the importance of these jobs to functioning of the workforce as a whole, Thrive Inland SoCal supports efforts to improve job quality in these occupations.

The Opportunity Industries methodology requires first establishing a minimum threshold for what counts as a quality job in a particular place. This threshold is determined using two inputs:

- Creation of localized “market basket” budgets of basic monthly expenses (e.g., housing, food, childcare, healthcare, transportation, taxes, emergency savings) for different family sizes and compositions
- Analysis of an hourly wage curve that takes a broad range of family compositions and income needs into account to figure out the proportion of the local population that will be able to achieve financial self-sufficiency at a particular income level.

The analysis in this report is based on the annual wage needed for available jobs to lift half of all struggling working residents into self-sufficiency. Provisional modeling determined that wage to be about \$63,036 a year (or about \$31/hour).

Please see Appendix B – Methodology for more detail on how analyses were conducted.

*Source: Shearer and Shah, "Opportunity Industries: Exploring the Industries that Concentrate Good and Promising Jobs in Metropolitan America," Brookings Institution, 2018.*

In the past, job creation numbers were seen as a core indicator of regional economic health alongside capital investment in factories, warehouses, and other facilities. Although these metrics do capture important information among the health of the economy, they provide little insight into who is benefitting and who is being left out.

Over the last 10 to 15 years, the shortcomings of this older approach to economic development have become more and more apparent. Stakeholders now recognize that an exclusive focus on job counts and other high-level growth numbers can mask very real disparities that endanger the long-term health of regional economies. They see the value in digging deeper into the data to examine the quality of the jobs being created and determine whether quality jobs are broadly accessible across different resident demographics.




Many regions have started to think differently about what makes for a successful economy. They understand that inclusive economic development is the most direct path to a strong, dynamic, and resilient economy as well as a matter of basic fairness.<sup>2</sup> This new perspective prioritizes the quality of economic growth generated—its ability to generate higher-value goods and services, which leads to better wages—and aims to improve outcomes for all residents.

Metro Monitor, a tool developed by the Brookings Institution, offers one framework for inclusive economic development. As shown in the graphic below, Metro Monitor takes traditional growth metrics (number of jobs created, value of goods and services produced) into account while acknowledging that these numbers are not sufficient for measuring the health of a regional economy. To achieve a truly inclusive economy, the Metro Monitor framework argues that

<sup>2</sup> Joseph Parilla, “Opportunity for Growth: How Reducing Barriers to Economic Inclusion can Benefit Workers, Firms, and Local Economies” (Washington: Brookings Institution, 2017).

regions must also pay attention to prosperity—the quality of the growth—as well as inclusion—whether all residents have an opportunity to benefit from the growth that results. This equal attention to measures of growth, prosperity, and inclusion is helping redefine economic success to include broad-based benefit that extends to all residents.

## Brookings Metro Monitor framework for inclusive economic development

<p style="text-align: center;"><b>GROWTH</b></p> 	<p style="text-align: center;"><b>PROSPERITY</b></p> 	<p style="text-align: center;"><b>INCLUSION</b></p> 
<p><i>Why does growth matter?</i> Creating more jobs and boosting the regional economy leads to higher demand for workers, better wages, and new firms that generate wealth and jobs that pay well.</p>	<p><i>Why does prosperity matter?</i> Having more productive businesses helps the economy grow and creates quality jobs. This allows the region to compete based on the skills of its workers, not its low wages.</p>	<p><i>Why does inclusion matter?</i> Everyone should have access to opportunities that let them provide for themselves and their families. This enables all residents to reach their full potential.</p>
<p><i>How we measure growth:</i></p> <ul style="list-style-type: none"> <li>• Number of jobs created</li> <li>• Total value of goods and services produced</li> <li>• Number of new businesses started</li> </ul>	<p><i>How we measure prosperity:</i></p> <ul style="list-style-type: none"> <li>• Productivity (value of goods and services produced per job)</li> <li>• Standard of living (value of goods and services produced per resident)</li> <li>• Average annual wage</li> </ul>	<p><i>How we measure inclusion:</i></p> <ul style="list-style-type: none"> <li>• Employment rate</li> <li>• Median annual wage</li> <li>• Relative poverty rate (percentage of people who are considered poor compared to others in the region)</li> </ul> <p style="text-align: center;"><i>We break these measures down by race, gender, education, and other factors to make sure that certain groups are not left behind</i></p>

Source: Brookings Metro Monitor

Inclusive regional economic development pays attention to the quality of the jobs created and makes these jobs accessible for all residents. In doing so, it recognizes the importance of building on a region’s distinctive economic assets that enable it to compete with other U.S. and international regions. These strengths can take many forms: a cluster of companies in an industry known for creating quality jobs, an established research university, a proven workforce development system that can meet area employers’ skills needs.

Once a region identifies its competitive advantages, it can then devise and implement a plan to drive growth in high-potential industries, boost economic mobility via solid career pathways, and encourage wealth-building through entrepreneurial supports, small business help, and other interventions to support strong and growing local businesses.



## Solid growth but persistent disparities

The first phase of CJF involved an in-depth assessment of the Inland SoCal economy and its performance between 2012 and 2022.<sup>3</sup> The region saw tremendous growth during this period. Across all sectors, Inland SoCal outperformed the U.S. and California in terms of the number of jobs created, earnings, and value added. Industries that provide goods and services for area residents represented more than 60 percent of all job growth (nearly 270,000 jobs) from 2012 to 2022. The logistics sector was a major contributor as well, with almost 145,000 new jobs.<sup>4</sup>

Despite these impressive results, Inland SoCal struggled to keep pace with the U.S. and California on average earnings and productivity during this same period. This middling growth in prosperity stemmed in large part from the fact that much of the job growth between 2012 and 2022 took the form of low-wage work with little or no opportunity for career advancement. Quality jobs—those that pay a livable wage, include employer-provided health insurance, and will continue to do so over the next ten years—were an increasingly smaller piece of the pie, accounting for just 26 percent of jobs in the region by 2022.<sup>5</sup>

Because of this gap, too many families in the region struggle to make ends meet. At least 40 percent of Inland SoCal residents belong to a family that cannot meet its basic living expenses each month, plus modest savings for emergencies and long-term planning. Of this group, three out of four have at least one adult in their family who works. Workers of color, younger workers, and those with limited formal education face particular challenges that increase their likelihood of being part of a struggling family.

By the Thrive coalitions policy objectives to reduce the number of struggling working parents by half, Inland SoCal has a shortage of more than 500,000 quality jobs -- which means that there simply are not enough quality jobs to go around. As long as this quality jobs gap exists, there will always be workers in the region who cannot find a job that provides a level of financial stability and opportunities for upward mobility.<sup>6</sup>

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<sup>3</sup> Due to lags in data releases by the U.S. Census and other sources, 2022 datasets are the most recent available.

<sup>4</sup> Brookings and Cities GPS analysis of Lightcast estimates.

<sup>5</sup> Brookings and Cities GPS analysis of Lightcast estimates and American Community Survey 1-year public-use microdata sample.

<sup>6</sup> Brookings and Cities GPS analysis of University of Washington Sufficiency Standard and American Community Survey 1-year public-use microdata sample, 2019-2021.

# The Inland SoCal region has a substantial quality jobs gap

## Inland Empire quality jobs gap, by county

Calculated as the number of struggling workers that did not hold a quality job in 2021

■ Riverside County ■ San Bernardino County

Riverside County: 269,417

San Bernardino County: 265,846



Source: Brookings and Cities GPS analysis of Lightcast estimates and American Community Survey 1-year public-use microdata sample.

## The critical role of quality jobs

The term “quality job” means different things to different people. Most agree that a quality job offers financial stability and benefits. Opportunities for career advancement figure into job quality as well. Quality jobs provide training and promotions that allow workers to move up the economic ladder. Many people also view work-life balance, time spent commuting, and personal fulfillment as important factors for determining job quality.

“...it’s one thing to have a job and you’re doing just because you have to do it . . . because it’s about survival, as opposed to something that you enjoy going to and you’re going to put your all into . . .”

— Destiny Grace (pseud.), cultural community liaison  
(UCR interview)

For the purposes of CJF, Thrive Inland SoCal uses quantitative factors—things that can be measured with numbers—to define “quality job” because these attributes are measured in the same way across all industries, employers, cities, and towns throughout the nation.

But quantitative analysis provides only part of the story. Numbers cannot tell us about other factors that affect people’s experience at work, such as hours, scheduling, and workplace environment (e.g., indoor vs. outdoor). These qualitative aspects—things that are best

described with words—are more difficult to assess, both because information is not collected in a way that can be compared easily across different companies, industries, and locations, and because different people want different things out of their jobs.

To get at these more subjective insights, the Thrive research team talked with over 75 Inland SoCal residents, including workers from different industries; workforce development board leaders; entrepreneurs and small business owners; chambers of commerce, community-based organizations, and nonprofits; and public officials at the city, county, and tribal levels. These interviews paid special attention to those industries that employ the largest number of workers in the region—education, food services, healthcare, retail, and transportation and logistics. Interview participants represented the diversity of the region in terms of age, race, gender, socioeconomic status, and geographical location. Their voices helped round out the picture and provided important insights that helped inform the strategy design process.

There are a few broad ways to address job quality in a region: (i) creating new quality jobs, (ii) improving existing jobs through labor organizing or productivity gains, (iii) implementing policy changes on wages or subsidies, and (iv) reducing family costs like child care or housing. An emphasis on creating new quality jobs aligns most closely with the regional focus of Thrive Inland SoCal, CJF’s industry sector prioritization requirements, and potential for entrepreneurship and wealth-building. Improving existing jobs is a second area of possibility in specific industries where training and technology adoption can improve value, or through community benefit agreements, but those also are significantly about individual companies and collaborations among employers, workers, and local unions. Policy changes are handled by city, county, and state governments, so important to influence but beyond the direct control of regional economic collaboratives aligning their own resources on agreed interventions to a shared outcome.

## Focus areas for Thrive strategy development

With the State of California’s CJF guidelines as a starting point, Thrive Inland SoCal also drew on insights gathered through extensive research and community engagement when selecting focus areas for this strategic plan. The four categories of action described below capture the breadth of the strategies set forth in this report.

- *Quality job creation:* Expanding the number of quality jobs in the region is the core ambition of CJF and a critical first step in ensuring that more Inland SoCal residents have the opportunity to prosper. Growth in “opportunity industries” (those industries most likely to create a lot of quality jobs) offers the best chance for economic diversification and an increase in the number and proportion of quality jobs in the region.
- *Quality job access:* To ensure inclusive outcomes, quality job creation strategies must be paired with deliberate efforts to establish clear, well-supported pathways into quality jobs in the region. Targeted outreach and programming that reduces barriers to participation will make these opportunities broadly accessible across different demographics and levels of educational attainment.
- *Economic mobility and wealth-building:* In addition to increasing the number and accessibility of quality jobs, support for entrepreneurs and small business owners, access to transportation and technology, and childcare all have a role to play in putting economic mobility and wealth-building within reach of Inland SoCal families.
- *Vitality and quality of life:* Throughout the CJF process, community members highlighted a number of issues as central priorities for the vitality and quality of life in Inland SoCal.

Concerns such as housing, mental wellness, and food security are essential for equitable outcomes. Because these matters are outside the scope of CJF, they should be prioritized for resources from other funding sources.

Inland SoCal will only be able to build an inclusive regional economy if it takes action on all four of these focus areas.

## Thrive Inland SoCal Theory of Change

	Quality job creation	Quality job access	Economic mobility and wealth-building	Vitality and quality of life
<b>TODAY</b>	Strengthen industries with high-potential for quality job creation	Establish clear, well-supported pathways into quality jobs	Help Inland SoCal residents get the support they need to prosper	Issues such as housing, food security, and mental wellness are beyond CJF scope but important for an inclusive regional economy
<b>5 – 10 YEARS</b>	Companies that offer quality jobs expand in Inland SoCal Inland SoCal attracts venture capital, philanthropic interest, and public funding to support continued growth	More residents secure quality jobs in healthcare, the trades, and other local-serving industries	More residents are able to start and grow their own businesses More residents contribute to the economy because they have access to childcare and other supports	Inland SoCal attracts philanthropic and public-sector investment to address these critical concerns The growing regional economy generates more tax revenue to fund regional social services
<b>LONG TERM</b>	Clear, well-supported career pathways help more residents get quality jobs in high-potential industries More Inland SoCal residents have quality jobs with family-sustaining wages and other benefits			Demand for social services falls as more residents move into quality jobs and open successful businesses

**RESULT:** Inland SoCal is a more inclusive, climate-ready region that offers all residents access to opportunity.



## Regional, local, and community action

The Inland SoCal economy resembles a set of concentric circles. The outermost circle is the regional level, which is the focus of CJF. Within it is the local level, composed of cities and towns within the region. At the center is the community level, which includes the many neighborhoods and groups that make up Inland SoCal's cities and towns.

### Action takes place within and across each of these levels



Fostering a more successful and more inclusive regional economy requires working within and across all three levels. Each has a specific role to play:

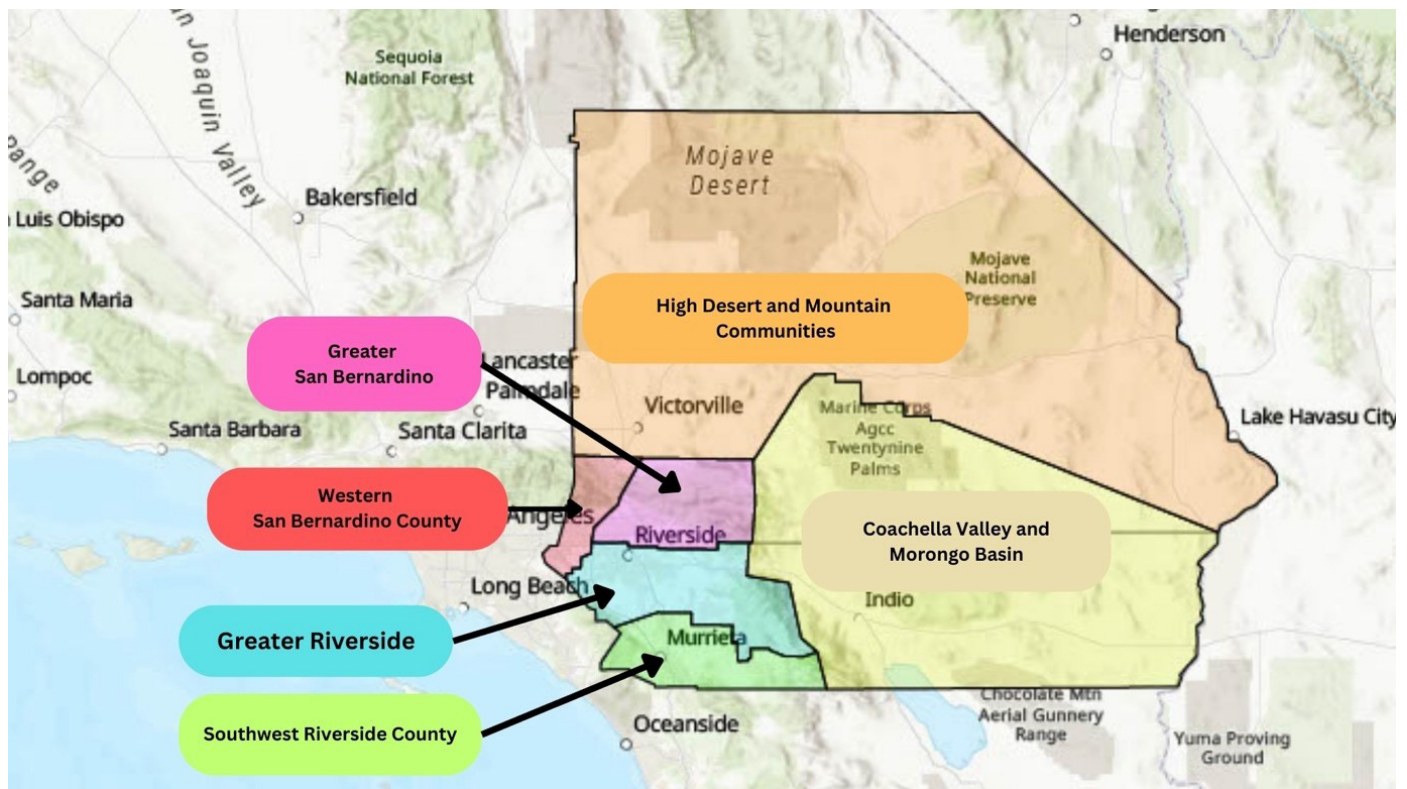
- *Regional economic development* focuses on designing and implementing strategies for an entire region (in this case, Riverside and San Bernardino Counties). Activities often include regional innovation and entrepreneurship support programming, workforce development initiatives informed by area employer needs, and regional infrastructure investments. Organizations involved include regional economic development organizations, workforce development boards, labor unions, universities, community colleges, and entrepreneur support organizations.
- *Local economic development* tends to happen at the city level. Cities and towns shape their local business environments by deciding how land can be used, overseeing permits and licenses, and setting tax rates. Some cities and towns also provide support for local entrepreneurs and small business owners, often with a focus on main street businesses that serve local customers. Organizations involved include city economic development agencies, nonprofits, local chambers of commerce, K-16 schools, and entrepreneur support organizations
- *Community development* happens at the neighborhood level. It relies on strategies that are designed to meet the needs of a particular community, such as targeted job training programs, buy-local initiatives, downtown improvement efforts, arts and culture

programming, cooperatives, and community land trusts (where community members own and manage property as a group). Organizations involved at the community level include community-based organizations, neighborhood groups, and downtown business associations.

By making the most of their unique insights and capabilities, people working at each of these levels can help build a more inclusive and resilient regional economy.

Bringing local and community stakeholders into the regional economic strategy development process has been a priority for Thrive Inland SoCal from the start. Subdividing the region into six discrete subregions has allowed for closer contact with communities who otherwise might not have taken part. The Thrive Subregional Tables (SRTs) have worked to ensure that specific strengths, challenges, and priorities within each subregion have been taken into account in the design of the strategies in this report.

## Thrive Inland SoCal is composed of six subregions



## Thrive Inland SoCal's approach to community engagement

CJF community outreach and engagement spanned three distinct phases. This approach helped ensure engagement from community members and key affinity groups at every stage in the development of this plan.

*Phase 1:* Defining a quality job was conducted by the Thrive outreach committees and the six SRTs during October 2023 - February 2024.

*Phase 2:* Identifying barriers to quality jobs and solutions took place in SRT meetings and constituency-based focus groups (e.g., labor, reentry populations) in March and April 2024.

*Phase 3:* Reviewing regional strategies occurred via SRT-based review committees in May 2024, with additional review by these committees and the Thrive Inclusive Planning Council in July and August 2024

A Community Insights Survey augmented these activities by providing a way for community members to contribute even if they were unable to participate directly in the SRTs. This survey gathered information on job availability, job training, career advancement, and workforce readiness in the region. It was made available in English and Spanish via events, meetings, and email outreach. Most respondents completed the survey using a mobile phone or computer. The survey was not administered in a way that would ensure representativeness by subregion, age, affiliation, or any other demographic category.

A total of 711 responses were collected between February 13, 2024 and April 15, 2024. Of this number, 289 surveys were excluded as duplicates, overly brief responses, or fake submissions. The remaining 422 surveys included respondents from throughout Inland SoCal, with most residing in the four metropolitan subregions (Greater Riverside, Greater San Bernardino, Southwestern Riverside County, and Western San Bernardino County). The rural SRTs (High Desert and Coachella Valley and Morongo Basin) had the lowest survey participation with 18 and 12 surveys completed, respectively.

Survey results provided another window into the concerns and priorities of Inland SoCal residents. Topics receiving the greatest emphasis included access to career pathways and education and training opportunities, childcare affordability and availability, support for local entrepreneurs, the importance of social and cultural capital, access to technology, affordable housing, and transportation.

## A note on terminology

The language that people use to talk about race and ethnicity is complex and constantly evolving. Many people have their own preferences for how they describe their racial and / or ethnic identity based on their past experiences, cultural background, age, and other factors. Terms that one person finds respectful and affirming might be read very differently by someone else, even when both people identify with the same racial or ethnic group.

Thrive Inland SoCal chose to use "people of color" when referring to those who identify as a race and/or ethnicity that is other than white. The term "people of color" admittedly has its own limitations and may not be the preference of some readers. The intention behind this choice was not to diminish or obscure the unique challenges and experiences faced by

different racial and ethnic groups. Rather, Thrive Inland SoCal aims to provide a workable vocabulary for discussing broader trends and disparities that persist between white residents and residents of color in the region.

Each person's identity is composed of many different elements that intersect and interact in distinctive ways. This concept, known as intersectionality, recognizes that people's lived experience is shaped by a combination of various identity markers - including but not limited to race, ethnicity, gender, sexual orientation, socioeconomic status, age, religion, and physical and mental ability.

Intersectionality recognizes that these different facets of a person's identity cannot be understood in isolation from one another. For example, a working-class Latina may experience the world differently from that of a middle-class white woman even though both identify as women. An elderly Asian American man may face challenges quite different from those encountered by an Asian American teen. Recognizing intersectionality provides a more nuanced understanding of people's experiences as they navigate privilege and discrimination in their everyday lives.

Thrive Inland SoCal strives to remain mindful of the diverse, intersecting identities present in the region and encourage readers to consider how these intersections shape the lives and outcomes of residents each day.

## Overcoming obstacles to collaboration

Inland SoCal's participation in the CJF process has highlighted the need for proactive coordination and collaboration across the entire region. Over the years, a wide range of Inland SoCal organizations—some affiliated with local government, others with industry, community groups, universities, and philanthropies—have published plans and reports that analyze the region's challenges, identify potential opportunities, and set out a vision for the regional economy. But once these reports are released, the region often struggles to take action on these plans. This pattern creates frustration and erodes trust, which makes collaboration more challenging in the future.

As a whole, the region has long suffered from the lack of a unified vision. Its many jurisdictions and organizations tend to vie for resources separately instead of seeking opportunities to collaborate for greater impact. This intensely competitive atmosphere leaves little space or appetite for working together on shared goals.

A significant source of tension stems from a perceived conflict between regional economic development and community development. Each has a distinctive role to play that is anchored in particular goals, priorities, and geographies. But these differences do not mean that community development and regional economic development must be at odds. In reality, these two functions should complement one another—one focusing on regional issues and the other on community and neighborhood concerns.

Resource constraints also pose a challenge for regional collaboration. Limited funding creates a sense of scarcity that leads to zero-sum thinking and crowds out the possibility of collaborative action. Memories of past traumas and present-day challenges reinforce these perspectives, sparking skepticism on the part of community members, organizations, and industry alike. Instances of shallow community engagement and decisions made with minimal community input have undermined trust over the years, leading some to believe that those in leadership positions are too far removed from community concerns.



If Inland SoCal hopes to grow a more inclusive regional economy, it will need to break with this fixed mindset in favor of an approach that encourages continuous learning, invites candid conversations across different constituencies, and assumes the good intent of all involved. Rebuilding trust among the region's many communities will require greater attention to every aspect of strategy implementation, including identifying funding sources, assigning organizational responsibilities, addressing inclusion and equity concerns, and tracking progress over time.

California Jobs First presents an opportunity to start the much-needed transition towards a more inclusive style of economic and community development. Thrive Inland SoCal has taken on the challenging task of creating a shared language and vision that are rooted in community needs, local knowledge, and the recognition that economic growth and quality job creation are prerequisites for an inclusive regional economy. This more deliberate, action-oriented approach to regional economy-shaping will ensure that time and efforts invested lead to tangible, inclusive outcomes.

# Phase 1 research findings

To inform Regional Plan Part I (submitted to the State of California at the end of 2023), the Thrive Inland SoCal research team analyzed data, conducted research, and had one-on-one conversations and group discussions with a wide range of regional stakeholders to better understand the regional economy, its challenges in achieving inclusive economic growth, and potential opportunities to explore. The findings below represent a selection of insights that informed the design of Inland SoCal’s Regional Plan Part II strategy report.

## Growth in the Inland SoCal regional economy

*Key takeaways:*

- Inland SoCal has seen substantial economic growth in recent years
- Local-serving industries and logistics, which play an outsized role in the regional economy, helped supercharge job creation in the region.

Traditional metrics paint a largely positive picture of the Inland SoCal economy over the past decade (see Figure 1). The region has seen phenomenal jobs growth since 2012, buoyed in large part by the steady expansion of e-commerce and industries that serve the growing regional population. Earnings and value-added rose as well, exceeding job growth metrics over the same period. Across each of these high-level metrics, Inland SoCal vastly outperformed both national and state benchmarks, across all of its counties and subregions.<sup>7</sup> Within the region, Riverside County outperformed San Bernardino County, even as both exceeded expectations.

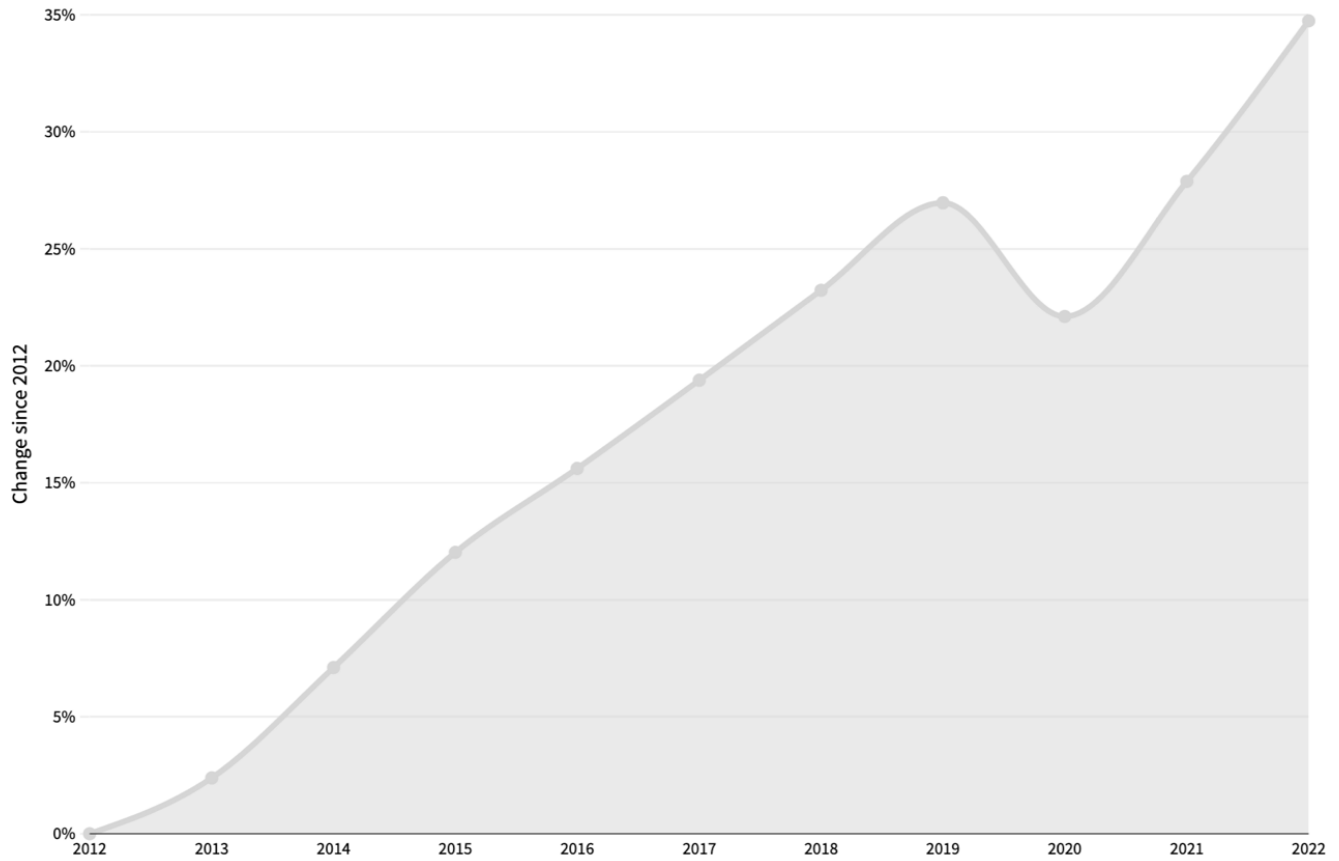
<sup>7</sup> This analysis employs shift-share analysis to determine the role of national and state performance in driving regional results and pinpoint the local share of growth. Such analysis helps identify which areas are particular regional strengths and which are buoyed by broader trends.

# Figure 1. Inland SoCal saw phenomenal job creation and economic growth 2012-2022

Economic performance in the Inland SoCal region, 2021 – 2022.

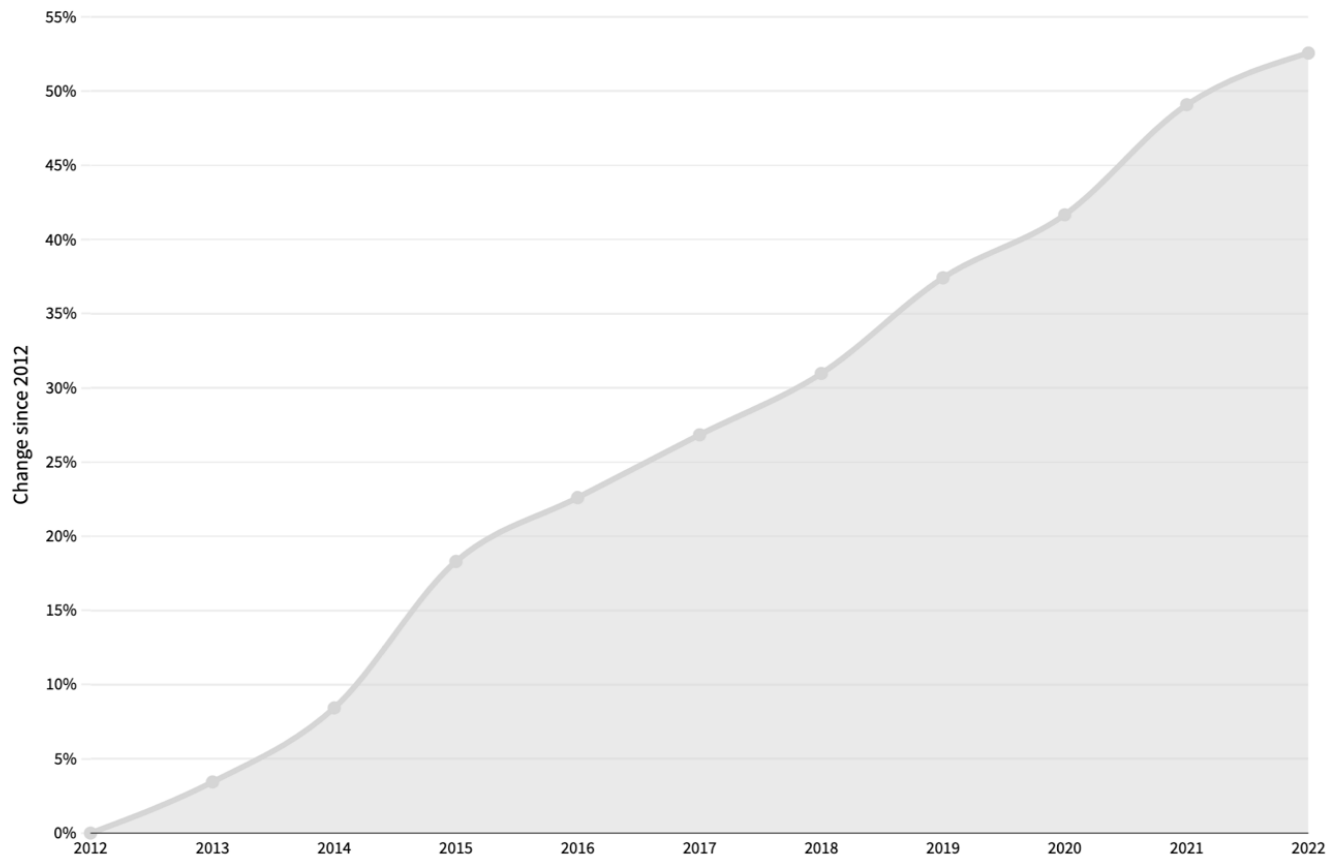
## Jobs

Total growth

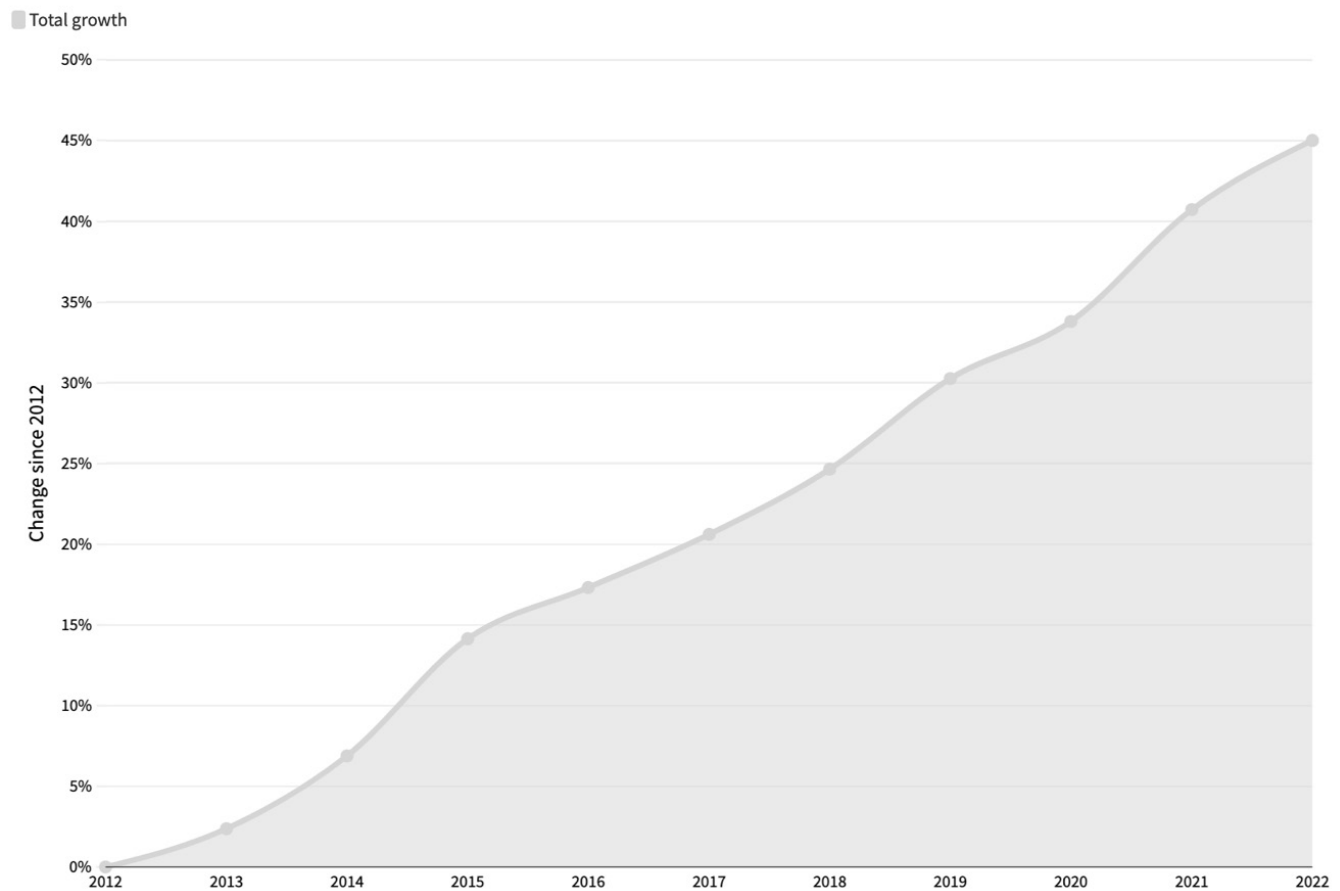


# Earnings

■ Total growth



## Value added



Source: Brookings and Cities GPS analysis of Lightcast estimates.

This growth has been reinforced by the region's foundation of assets. Extensive goods movement infrastructure, proximity to the Ports of Los Angeles and Long Beach, and general affordability have had a hand in this economic trajectory, alongside increasingly strong community colleges and universities that are comparatively well aligned with occupational demands. The region also continued to attract new residents bringing spending power and more output.

However, despite these impressive trends, regional economic performance was middling on productivity and average earnings, two key measures of prosperity. Productivity grew in the low single-digits leading up to the pandemic, when it surged as a result of lay-offs in less productive, lower-paid industries. It has since been on the decline, with information, construction, and hospitality lagging benchmarks the most.<sup>8</sup> Average earnings also surged during the pandemic from a single-digit base and are now on the decline.

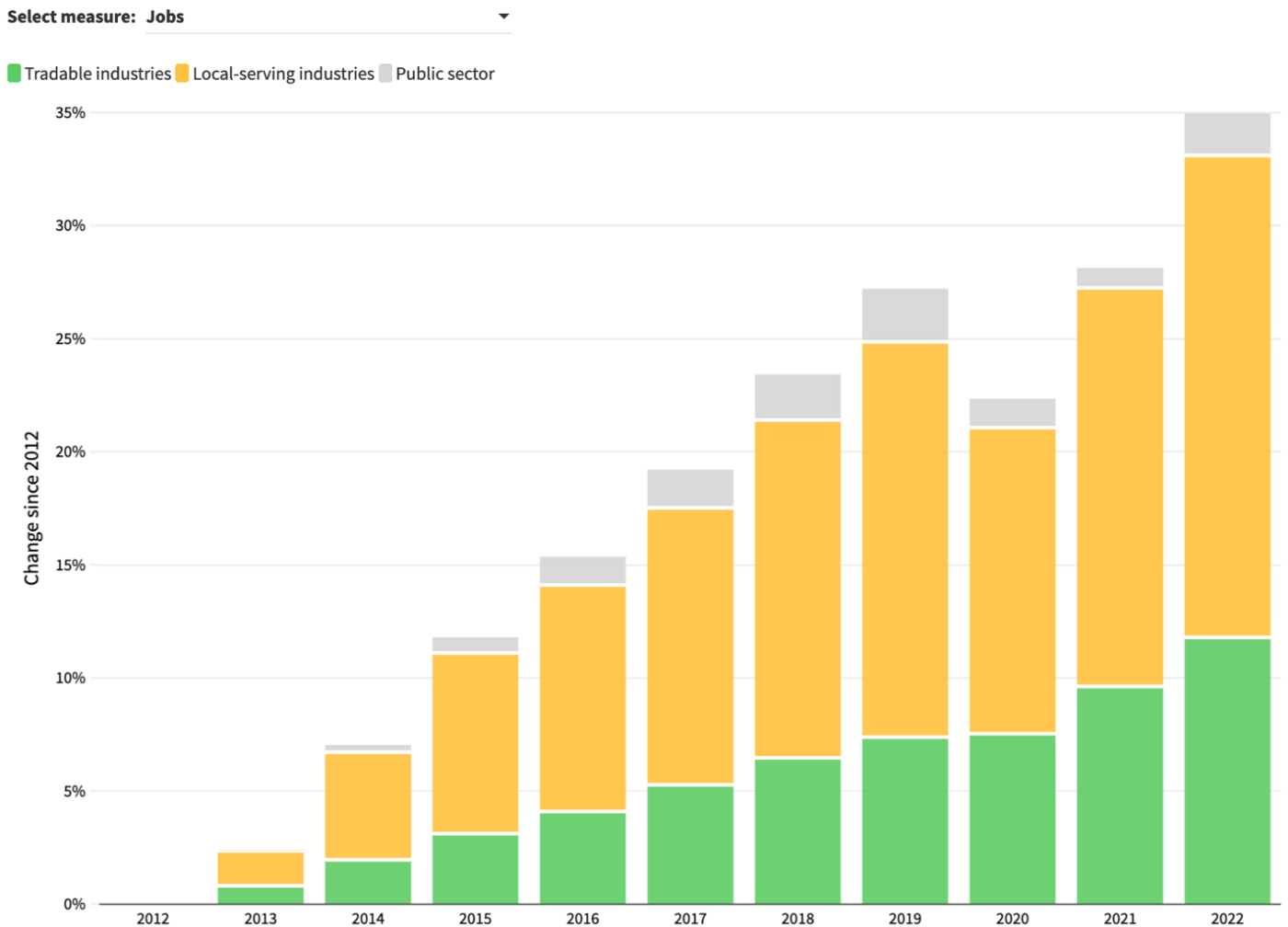
Taken together, these results suggest that the region's sizeable economic growth in recent years took place in lower-value sectors that lack the means to substantially increase worker wages. Local-serving industries dominated regional economic growth, suggesting weaknesses

<sup>8</sup> In contrast to its performance on jobs, Riverside County struggled to meet California and U.S. expectations for productivity. Although San Bernardino County was able to match its state and national benchmarks for productivity, Riverside County performed slightly worse. Riverside County failed to meet either expectation from 2016 onward

in traded sectors, which are essential for sustained success in today’s global economy. Traded sectors are those industries that sell goods and services to customers located outside the region. These sales bring new money into the regional economy and can generate economic growth well beyond that of local-serving sectors (see Figure 2).

## Figure 2. Local-serving industries dominated economic growth in Inland SoCal 2012-2022

Sectoral contributions to economic performance in the Inland Empire region, 2012 – 2022

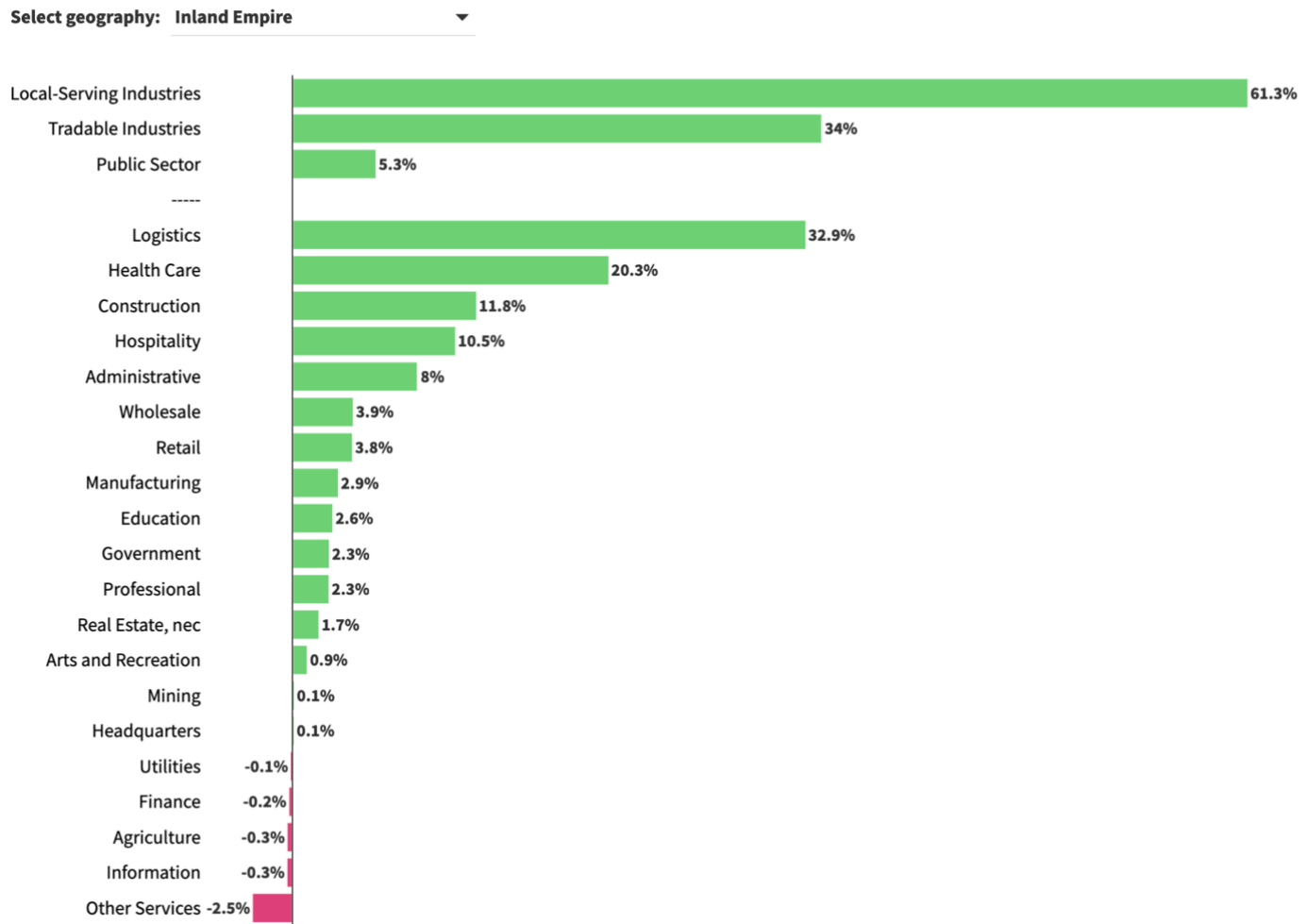


Source: Brookings and Cities GPS analysis of Lightcast estimates.

Job growth in Inland SoCal has been driven predominantly by local-serving industries and logistics (see Figure 3). Between 2012 and 2022, local-serving industries accounted for over 60 percent of job growth in the region. Logistics represented nearly 33 percent of job growth across the region, with percentages slightly higher in San Bernardino County (41.6 percent) compared to Riverside County (25.1 percent). The public sector accounted for 5 percent of total job growth. Other industries accounted for a very small portion of job growth.

## Figure 3. Logistics and local-serving sectors drove Inland SoCal job growth between 2012 and 2022

Actual share of employment growth by industry in the Inland Empire 2012 – 2022\*



Source: Brookings and Cities GPS analysis of Lightcast estimates.

### The outsized role of logistics in Inland SoCal

The Inland SoCal logistics sector is a substantial economic force in the region and a key node in the national and global goods movement network. State policies have promoted growing supply chain and logistics as both an economic engine and enabler of other industries in California, with significant emphasis on the Ports of Los Angeles and Long Beach and their highly paid jobs. This in turn spurred growth further inland needed to handle goods movement coming through the ports and serving demands of an expanding southern California population.

Massive industry investment over the years has resulted in an expansive system of warehouses, distribution centers, and intermodal logistics infrastructure. The immense scale

of the sector is reflected in its workforce: 215,000 Inland SoCal residents work in logistics. The quality of jobs in this sector – particularly in warehousing that comprises the vast majority of employment – often receives criticism because about one-third of logistics jobs offer opportunity. Yet it still concentrates an equivalent proportion of promising jobs and ten percent fewer quality jobs as the healthcare sector. Further, the sheer size of the logistics workforce means the number of opportunity jobs is roughly equivalent to construction, driven by the presence of tens of thousands of quality and promising jobs in roles such as supply chain managers, logistics engineers, data analysts, technicians, and transportation coordinators.

Additionally, congestion, health, and environmental impacts of this concentrated logistics sector are common concerns raised by the community. Yet billions of dollars in state and federal investments toward greening California’s seaports have not been matched for its “inland ports” that are equally critical to achieving supply chains that are resilient and sustainable.

Although past efforts to move the sector up the value chain by making the region a “center of excellence” for innovation and commercialization of sustainable logistics products and services did not come to fruition, some elements of those plans still hold relevance. Digitization and decarbonization are of particular potential given looming state climate targets. Improved coordination and collaboration with the Ports of Los Angeles and Long Beach and the Los Angeles area more broadly, alongside similar investments, will streamline and accelerate logistics-related climate action throughout the southern California megaregion.

## Inland SoCal’s struggling families

### *Key takeaways:*

- The region’s quality jobs gap means that too many Inland SoCal families struggle to make ends meet each month.
- Financial, educational, and social barriers can make it harder for struggling workers to get and keep a quality job.

Over the past ten years, Inland SoCal has seen a lot of growth in goods movement, warehousing, and local businesses that created many new jobs and increased economic output well beyond what had been seen in years past. But this growth did not produce enough quality jobs to close the region’s quality jobs gap. As a result, Inland SoCal has struggled to shift the balance and get more residents on a path to financial self-sufficiency.

## **What does it take to make ends meet in Inland SoCal?**

Determining how many Inland SoCal families struggle to meet basic living expenses first required calculating the minimum income needed to cover a standard household budget across a broad range of family compositions. A number of major institutions including the United Way, Economic Policy Institute, MIT, and University of Washington have developed living-wage calculators to estimate how much money is needed to live in a given location.



Each organization uses its own set of assumptions and datasets, which leads to different outcomes from one calculator to the next.

This report employs the University of Washington model, which uses moderate assumptions and takes into account how the number and age of children in a given household affect how much money a family needs to make ends meet. However, this model does not reflect the fact subsistence wages leave nothing left over at the end of the month, which makes achieving financial stability and resilience that much more difficult. To address this shortcoming, this report adjusts the University of Washington model to include emergency savings and modest wealth-building based on retirement savings targets. Even with the addition of these funds, the resulting self-sufficiency threshold allows for only a very basic standard of living.

Analysis of regional costs of living finds that workers in the region need relatively high incomes to cover basic household costs. For instance, a family of three with two adults and three kids requires \$80,704 per year in Riverside County and \$74,367 in San Bernardino County, assuming one adult provides childcare instead of working. If both adults work, the family needs to bring in \$98,357 in Riverside County and \$95,478 in San Bernardino County. Different family combinations (e.g., more or fewer children, one or two adults) require different income levels to meet basic expenses. Results for dozens of these combinations can be viewed in the [Inland Empire Economic Assessment Databook](#).

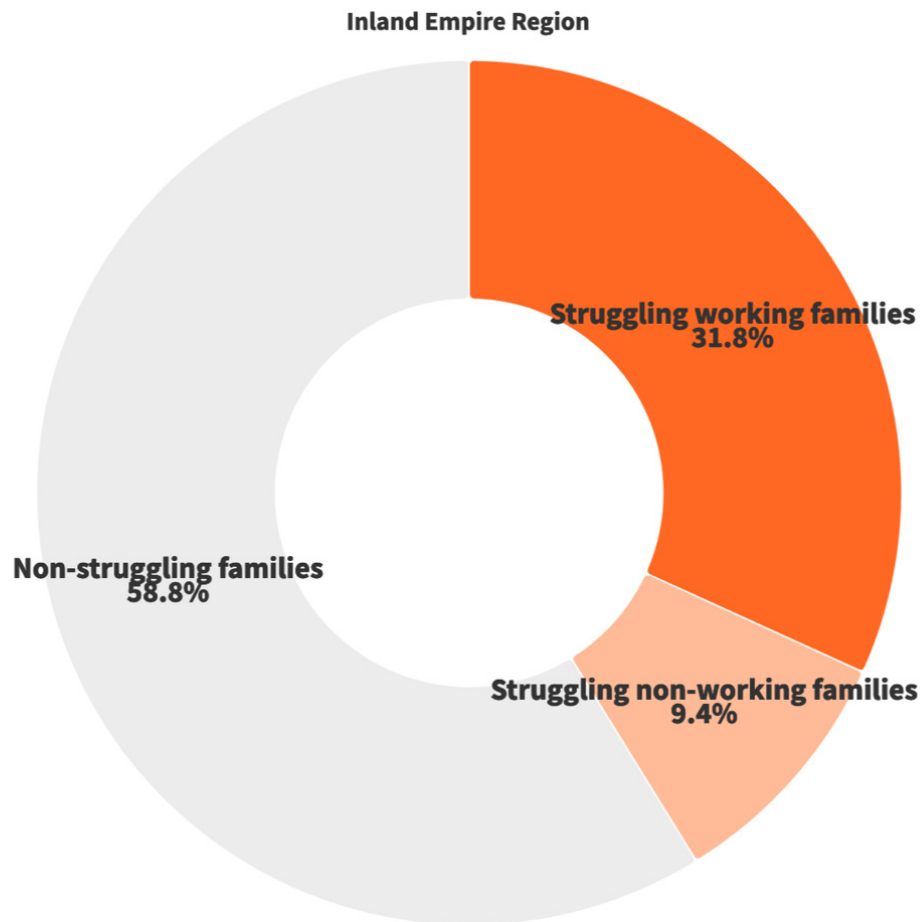
In practical terms, the quality jobs gap means that too many families in the region cannot make ends meet each month. Fully forty percent of Inland SoCal residents are part of a household that cannot afford its basic living expenses, plus modest savings. Of this group, more than three-fourths have at least one adult worker in their household (Figure 4), which suggests that the region's job base is not enabling workers to sustain themselves and their families. The region is not alone in this regard. Other parts of the state face similar challenges, with quality jobs gaps of varying sizes. Across California, this shortage of quality jobs poses a serious barrier to inclusive economic outcomes.

## Figure 4. Forty percent of Inland SoCal residents belong to a family that struggles to make ends meet

### Share of population in families that struggles to make ends meet

Members of families whose non-transfer income fell short of the self-sufficiency standard

Select year: 2021



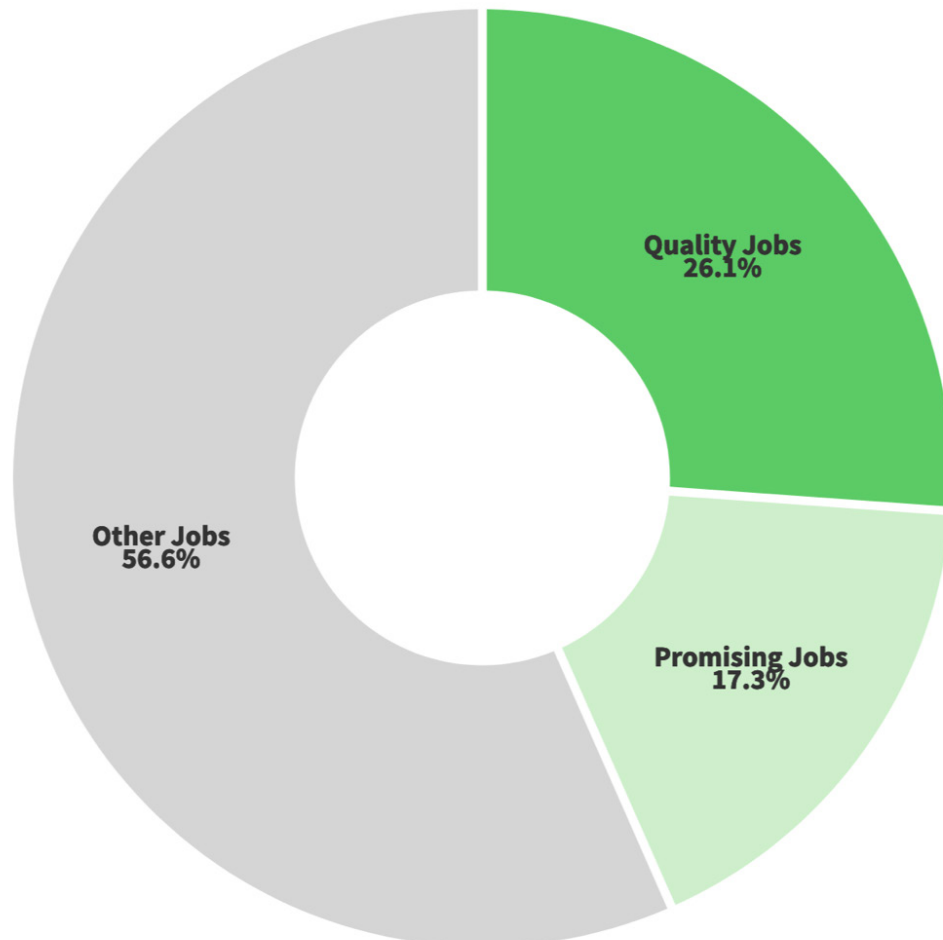
Source: Brookings and Cities GPS analysis of University of Washington Sufficiency Standard and American Community Survey 1-year public-use microdata sample, 2019 – 2021

The regional quality jobs gap is central to this story. In the Inland SoCal region, 26.1 percent of employment meets the definition of a quality job. Another 17.3 percent can be considered promising jobs, meaning that they will lead to a quality job within ten years. The remainder—more than half of all jobs in the region—do not pay a livable wage, include employer-provided health insurance, or offer stability in holding a quality job over the next decade (Figure 5). These other jobs make it difficult for households to achieve financial stability and encourage economic mobility from one generation to the next.

## Figure 5. Quality jobs account for just one-fourth of jobs in the Inland SoCal region

### Share of jobs that are "opportunity jobs" in the Inland Empire region

Select geography: Inland Empire Region Total ▼



Source: Brookings and Cities GPS analysis of Lightcast estimates and American Community Survey 1-year public-use microdata sample.

## Struggling workers face different barriers to quality jobs

A lot of Inland SoCal workers face barriers that make it harder for them to get and keep a quality job. These challenges have a big impact on which jobs they end up pursuing. They can be grouped into three main categories:

- **Financial:** Financial challenges often limit access to quality jobs. Rent, gas, and childcare costs pose major difficulties for families just trying to get through the month. Most workers cannot afford to take time off to train for a different job; those working more than one job face even higher barriers.

“. . . a lot of our workforce is at home because there isn't childcare options to put those kids in programs. . .”

— Cynthia Guzman (pseud.), Menifee econ dev specialist  
(UCR interview)

- *Educational:* All too often, Inland SoCal workers don't know about the quality job possibilities that exist in the region. In some cases, pathways into these jobs are hard to access and lack wraparound support services to support student success. Some workers also need help with digital skills, job search fundamentals, and access to technology and high-speed internet.
- *Social:* Unexpected job losses, long periods of unemployment, health problems or disabilities, and incarceration interrupt people's work lives and make it difficult to get back on track. Language barriers, immigration status, and discrimination can all block pathways into quality jobs as well.

## Competitive drivers of an inclusive regional economy

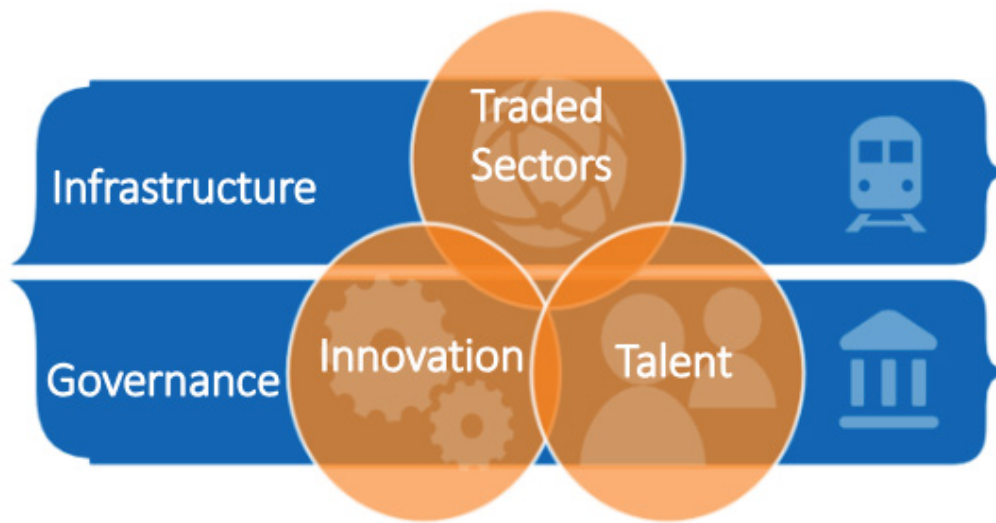
### Key takeaways:

- A strong and inclusive regional economy depends on its innovation, workforce, entrepreneurship and small business activity, infrastructure, leadership and ability to act, and industry clusters.
- The region has solid innovation assets thanks in large part to its universities and research facilities.
- Struggling workers in the region need help learning about and successfully pursuing pathways into quality jobs.
- Tech startups and local small businesses are important engines for job creation and wealth-building.
- Public transportation, climate-ready infrastructure, well-maintained roads, and high-speed internet are essential for an inclusive regional economy.
- Leaders in the region will need to collaborate, build community trust, and take action on strategies that support inclusive regional economic growth.
- Inland SoCal has four industry clusters with potential for creating large numbers of quality jobs: the clean economy, cleantech, cybersecurity, and advanced manufacturing.

A region's economic success depends on several core elements: driven by traded sector specializations built on innovation and workforce; and entrepreneurship and small business activity; and enabled by basic physical infrastructure and governance, or public-private leadership organized to act in concert. Understanding Inland SoCal's starting point in each of these areas provides important insights into strengths that can be leveraged and challenges that

will need to be addressed to spark durable economic growth and increase the number of quality jobs in the region.

## Drivers and enablers of economic competitiveness



Source: Brookings/McKinsey/RW Ventures

## Innovation

A region's competitiveness in the global market is strongly linked to its innovation capacity. This capacity enables both fundamental and applied research and development (R&D), which in turn creates new market opportunities, boosts productivity, and accelerates the adoption of cutting-edge technologies. Inland SoCal has a solid set of innovation assets that contribute to the regional economy. Home to two public institutions of higher education, leading environmental science research facilities, and the state headquarters for air quality programs, the region has underlying strengths in innovations related to climate or clean tech action—in energy systems, emissions, and materials. Research activities take place primarily at University of California, Riverside (UCR), which also has been filling institutional capacity gaps in regional economic development. Next to the UCR campus sits the California Air Resources Board (CARB) headquarters, a global leader in vehicle and mobile-source emissions testing. Strengthening connections and capabilities among these and other assets can help the region make the most of its regional innovation ecosystem.

“. . . innovation can stimulate the growth of new businesses and industries.”

— Thrive Inland SoCal Community Insights Survey respondent

## Workforce

The success of a regional economy and its ability to attract and retain high-growth companies hinges on the skills of its workforce. The ability of K-12 schools, community colleges, universities, and training programs to prepare workers for quality jobs now and in the future also

factors into this equation. Regions that make education and industry-led workforce development a top priority have an advantage when it comes to economic growth, successful companies, and opportunities for workers to improve their financial situation.

Overall, the Inland SoCal region's educational attainment is comparatively low – lagging both state and national high school diploma and bachelor's degree rates by nearly 10 percent. The region has been addressing this fundamental challenge through a range of interventions for more than a decade, with some progress, yet this differential is a major factor constraining economic competitiveness and mobility. Achieving the massive systemic changes needed are not the bounds of CJF, but are underway through other initiatives like the K-16 Collaborative.

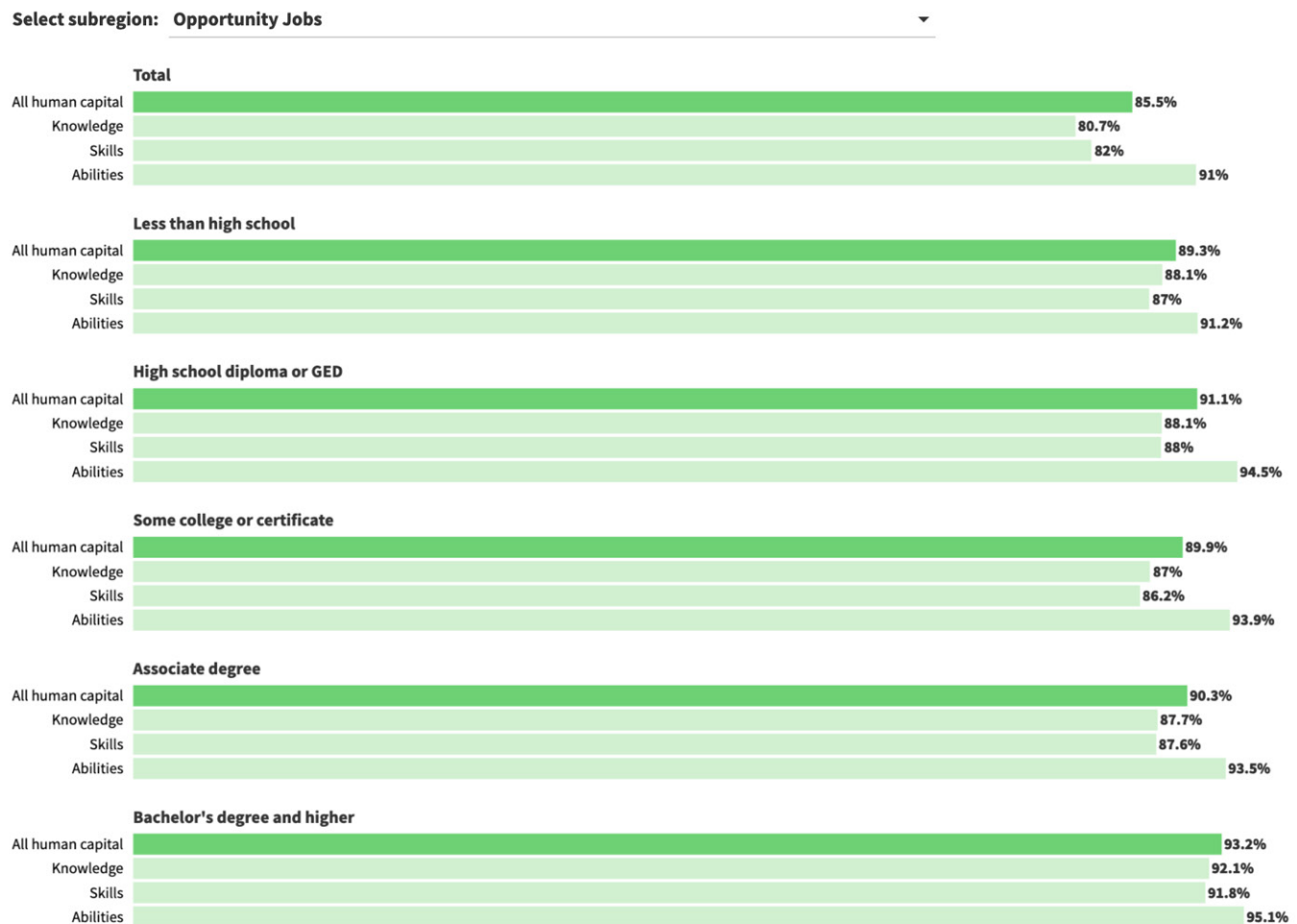
Technical skills and knowledge are particularly important for quality jobs compared to other kinds of jobs. However, preparing for a quality job does not necessarily require a lot of formal education or a lengthy training process. In many cases, an industry-recognized certificate course or short-term skills training program are sufficient preparation.

Helping more struggling Inland SoCal workers become financially self-sufficient will require raising awareness about quality jobs in the region and the training required, creating well-supported pathways that prepare workers for these occupations, and supporting struggling workers' success as they move into these jobs.

Analysis found that struggling workers in the region often have a lot of the knowledge, skills, and abilities that they need to pursue a quality job. The chart below (Figure 6) shows how the skills and abilities of Inland SoCal's struggling workers match up with those required for quality jobs in the region

## Figure 6. Struggling workers in Inland SoCal have much of the knowledge, skills, and abilities they need to pursue a quality job

### Average human capital overlap between struggling workers and opportunity jobs in the Inland Empire



Source: Brookings and Cities GPS analysis of O\*NET data, American Community Survey public-use microdata sample 1-year estimates, and Lightcast estimates.

Struggling Inland SoCal workers have 82.9 percent of the knowledge, skills, and abilities that quality jobs in the region require. The amount of overlap between the knowledge, skills, and abilities that workers have and what quality jobs require is different depending on how much education a worker has. Workers with a four-year college degree have the highest amount of overlap (91.5 percent). This means that they have almost all of the skills and abilities that good quality jobs are looking for. But even those workers with only a high school diploma or G.E.D. have a high degree of overlap (88.1 percent). These findings suggest that focused training programs with wraparound supports that address key barriers to participation (e.g., childcare, transportation, affordability concerns) could help more Inland SoCal workers—including those with lower levels of formal education—secure a quality job.

“. . . the community colleges are making great strides in terms of . . . tuition-free first two years of college and Pell grant increases at the federal level. . . . the more you can . . . provide resources for folks . . . the more you’re going to see people be able to take advantage of these opportunities.”

— Kurt Augsburger, director of workforce development  
San Bernardino Community College District

## Entrepreneurship and small businesses

A region’s level of entrepreneurial and small business activity indicates how well its economy can spot new market opportunities, create innovative products and companies, and boost local wealth-building and quality job growth. It serves as a measure of the region’s economic dynamism and its capacity to generate and sustain new ventures.

Several entrepreneurship initiatives in the region focus primarily on technology-driven startups with significant growth potential. These companies often look to venture capital for the funds they need to bring their innovations to market. When these startups succeed, they bring substantial benefit to the regional economy in terms of quality job creation and overall productivity.

However, supporting high-potential startups is just one piece of the puzzle. Equally important are the entrepreneurs who establish and operate main street businesses and local-serving companies. These small and microenterprises keep money circulating within the regional economy and play a vital role in boosting community investment and building generational wealth. Although Inland SoCal has a wide range of resources to support residents starting and managing successful businesses, residents’ access to these resources depends on their proximity to public transit, program capacity, childcare availability, and other factors. For many entrepreneurs and small business owners—especially those from historically underrepresented groups and/or underserved communities—the biggest challenge is often simply learning that help is available.

“SMEs [small and medium-sized enterprises] are often the backbone of economies, especially at the regional level. Providing support to SMEs through access to finance, mentorship programs, and streamlined regulatory processes can enable them to thrive and expand, . . . creating more job opportunities within the subregion.”

— Thrive Inland SoCal Community Insights Survey respondent

## Infrastructure

While not typically driving new economic activity, successful regional economies require enabling infrastructure, including efficient transportation systems, universal broadband internet



access, dependable clean energy, inclusive and sustainable local zoning, effective natural resource allocation, and well-maintained roads.

Well-planned and adequately funded infrastructure projects can enhance economic activity and improve residents' quality of life. On the other hand, lengthy administrative processes, deferred maintenance, poor local land use and resource management, and underinvestment in infrastructure can make life difficult for households, businesses, and local governments alike. Consistent upkeep of these assets is crucial for creating a physical environment that supports inclusive regional economic growth.

Inland SoCal has faced a number of climate-related challenges in recent years that have disproportionately affected communities with limited resources. As California's climate target deadlines draw near, local governments will need to determine how to fund and build climate-related infrastructure such as emission-free public transportation, charging and refueling stations for zero-emission vehicles, clean energy production and distribution, energy-efficient building upgrades, and other infrastructure needed for decarbonization, electrification, and climate resilience. Regular maintenance of roads and other infrastructure will likely be needed more often to address wear-and-tear caused by heavy trucks during hot weather.

Broadband connectivity represents another type of infrastructure that is increasingly difficult to live without. As more and more of our daily lives involve being online, access to high-speed internet has gone from a nice-to-have to a must-have. Extending broadband into all parts of Inland SoCal—whether cities, suburbs, reservations, or rural areas—is a regional imperative that cannot be deferred.

**“. . . the lack of both good public transportation and nearby job training programs is really hurting the ability for people to get entry-level skills and work . . .”**

**— Thrive Inland SoCal Community Insights Survey respondent**

## **Industry clusters**

When businesses in the same or adjacent industries locate near one another, they can benefit a great deal. These companies tend to buy from and sell to each other, creating a stronger local supply chain in the process. They can take advantage of a shared labor pool composed of workers with skills that their industry needs. They can also collaborate on innovations more easily and share ideas and infrastructure such as lab space, buildings, and public transit.

### **How were industry growth opportunities identified and vetted?**

Analysis conducted in late 2023 identified four relatively broad traded industry categories with strong potential for quality job creation that merited further exploration: sustainable supply chains and distribution, advanced manufacturing, advanced business and professional services, and clean tech. These categories passed an initial quantitative filter for prioritization:

2. The sector can expand access to quality jobs because it either: concentrates quality jobs for a) all workers, or b) mid-skilled workers with some college, a certificate, or an associate's degree;
3. The sector is tradable and has a high growth multiplier, meaning each job created spurs several others in the economy;
4. The sector is either a clear specialization in the region or emerging as growing faster locally than nationwide;
5. The sector can continue to be competitive given environmental standards and advances California Jobs First's goals of promoting a transition to a low-carbon economy (oil and gas-based industries are excluded; impacts of other industries can be remediated to varying degrees).

Thrive Inland SoCal then worked to validate and refine these areas through stakeholder interviews, supplemental data analysis, and engagement with the six SRTs. This process led to a shift in focus to emphasize **advanced manufacturing** and emerging opportunities in **clean economy innovation and adoption and cybersecurity** (a component of business services). Insights from these explorations are presented in the Quality Job Creation section that follows.

Informed by strategy development research and outreach, this plan focuses on three industry clusters selected based on their potential for high-value economic growth and their potential to create large numbers of new, accessible quality jobs in the region:

- The clean economy agenda centers on regional capabilities in energy systems, emission controls / remediation (air and water), advanced materials, and mobility tech. It aims to boost climate resilience, increase energy independence, and accelerate the transition to a carbon-neutral future. It encompasses a wide range of industries, products, and services that extend into almost every aspect of daily life, including clean energy, power grid infrastructure, buildings, and transportation. This strategy for innovation and commercialization will be complemented by accelerating adoption of clean economy solutions in the region to adapt existing activities, strengthening local businesses and improving quality of life for Inland SoCal residents (particularly those communities hardest hit by climate impacts and industrial pollution) in the process.
- Advanced manufacturing potential in the region focuses more specifically on reinforcing and repositioning legacy strengths from aerospace and similar production, including complex commercial and industrial machinery, microelectronics, and components. In services, both engineering and drafting are a natural part of this landscape and thus also included in the cluster. Given the energy-hungry nature of this sector, companies will need to combat GHG emissions and switch to clean sources in order to comply with state climate mandates.
- Cybersecurity is a refinement of opportunity within advanced business and professional services —protecting computer systems and networks against bad actors. An urgent demand from governments, businesses, and organizations of all sizes, the regional potential nearly a decade ago centered on a strength in simply training to fill unmet quality job openings. However, as capabilities and workforce production have expanded, along with acceptance of remote services, that possibility has extended to business and job creation. The technical and talent capacity in the region is converging with new relationships meeting needs of federal and defense agencies, emerging as a new base

for economic growth in cybersecurity activities not already occupied by regions focused on basic research or a government operation.

In addition to prioritizing regional industry clusters likely to create large numbers of quality jobs, this report also explores ways to improve residents' access to existing concentrations of quality jobs in particular industries. These strategies focus on **healthcare, construction and the trades, information technology, and management-level roles**. Strategies and tactics related to these sectors can be found in the Quality Job Access section below.

## Why were some ideas raised through community engagement not pursued?

Participants in Thrive's SRTs raised additional industry opportunities, such as the arts and tourism, as potential focus areas for building a more inclusive, equitable economy. These industries are important contributors to the region's civic fabric, quality of place, and employment base, particularly in some subregional areas. However, analysis shows that these industries provide few quality jobs.

Only 4.2 percent of hospitality jobs in the region meet quality jobs criteria; an additional 9.7 percent of jobs count as promising jobs, meaning they offer a pathway to a quality job within ten years. This encompasses activities from full-service restaurants (with 3.3 percent of jobs counting as quality jobs) to hotels (excluding casinos) and motels (with 10 percent of jobs counting as quality jobs). Given the scale of the region's hospitality industry, the region has almost 140,000 hospitality jobs that do not enable workers to make ends meet.

(Note: The data and stakeholders noted that casinos operated by Tribes offer higher quality jobs, with 64 percent meeting the Thrive threshold. However, these jobs represent less than 2 percent of all hospitality employment.)

Meanwhile, 11.7 percent of the region's arts and recreation jobs are considered quality jobs; an additional 19.2 percent are considered promising.<sup>9</sup>

## Connecting the dots: Subregional Capacity for Action Inventories

In addition to convening monthly meetings and soliciting input from community members, each SRT lead was tasked with creating a Subregional Capacity for Action Inventory of existing and proposed programs and initiatives in their subregion related to inclusive economic development. Through this activity, each subregion had the chance to highlight successful work underway, identify opportunities for greater alignment and collaboration, and surface promising possibilities for future efforts.

SRT leads were encouraged to enlist help from SRT members and others familiar with relevant local efforts connected to key drivers of inclusive regional economic development—talent, innovation, entrepreneurship and small businesses, infrastructure, governance and leadership. Each of the six subregions adopted a slightly different focus and approach to this

<sup>9</sup> Brookings / Cities GPS analysis of Lightcast estimates and American Community Survey 1-year public-use microdata sample.

task. Greater Riverside assembled an extensive list with entries across all categories. Western San Bernardino County emphasized offerings from a key subregional organization. Southwest Riverside prioritized talent and entrepreneurship, while Greater San Bernardino and High Desert focused exclusively on talent and Coachella / Morongo Basin concentrated on solar power.

The Capacity for Action Inventories are living documents that the SRTs can continue to build and refine over time. The inventories will be made available on the Thrive website as a resource for Inland SoCal residents to raise awareness of activities and organizations in each subregion and encourage greater coordination and collaborative action in the future.

# Strategies

One of the key ways that inclusive regional economic development differs from traditional approaches has to do with the focus of strategies proposed. Traditional economic development tends to prioritize industry-oriented strategies that create new jobs and accelerate sector growth. Inclusive economic development, by contrast, recognizes that job counts and industry growth alone will not necessarily lead to better economic outcomes for all residents of the region.

This strategy report instead focuses regional economy-shaping action and investment on three fronts:

- **Quality job creation strategies** seek to spur economic diversification and strengthen sectors most likely to create new quality jobs, increase household incomes, and bring money into the region by selling goods and services to customers located elsewhere.
- **Quality job access strategies** establish clear, well-supported pathways that enable more residents to pursue and obtain quality jobs in the region.
- **Economic mobility and wealth building strategies** help residents achieve financial self-sufficiency through mechanisms such as supporting entrepreneurship and small business success and improving access to transportation, technology, and childcare.

All three types of strategies are essential for inclusive regional economic development and must be pursued in tandem. *Investing in industries alone or in quality job access or economic mobility and wealth building alone will not be enough to reduce the number of struggling families in the region.*

Taken together, the strategies presented here chart a course for regional action in the years ahead. Given the scale and scope of these proposed actions, Inland SoCal stakeholders will need to braid together funding from a broad range of sources. Some strategies are suitable for CJF funding, while others are more appropriately funded with different kinds of private-, public-, and/or philanthropic-sector support.

## Quality job creation strategies

Closing the quality jobs gap must be a top priority if the region hopes to lift more struggling families into financial stability. Strengthening industry clusters that can create lots of new quality jobs must therefore be a core component of any inclusive regional economic development plan. In Inland SoCal, the clean economy, cleantech, cybersecurity, and advanced manufacturing clusters are well-positioned to accelerate quality jobs growth and climate action.

### Strategy: Clean economy innovation

*Leverage the potential of the region's emerging clean economy innovation cluster and establish the region as an ideal location for innovative clean economy firms to launch and grow.*

#### Key takeaways:

- Clean economy innovation is an emerging regional cluster with potential for long-term quality job creation and climate-resilient solutions.
- Widespread adoption of clean economy innovations has strong potential for equity impact in the region.
- A private / public / academic cluster-building collaboration can drive expansion, global branding, tech commercialization, business growth, and workforce development in clean economy innovation.
- Construction of a dedicated space for applied research, proof-of-concept testing, and startup incubation will provide a physical hub for the region's clean economy innovation cluster.
- The state-designated InSoCal Innovation Hub will strengthen innovation and entrepreneurship supports for sustainability-focused startups in the region.
- Significant investment in the state's inland port facilities will be needed if California expects to achieve its net-zero ambitions.
- A broad collective of stakeholders will need to work together to design and advance the energy transition in regional transportation, distribution, and logistics.
- Support for Inland SoCal clean tech manufacturers will encourage growth and help establish the region as a leader in this sector.

### Rationale and other considerations

Companies in the clean economy aim to address the effects of climate change, enhance climate resilience, increase energy independence, and accelerate the transition to a carbon-neutral future. This cluster encompasses a wide range of industries, products, and services that extend into almost every aspect of daily life, including clean energy generation, power grid infrastructure, workforce development, building design, and the transport of people and goods.

The clean economy has particular importance in California, which has one of the most ambitious climate mandates in the nation. Achieving the state goal of carbon neutrality by 2045 will require

growing the clean economy fast enough and large enough to meet rising demand. Because California has fallen short on its interim milestones thus far, action at greater speed and scale will be needed if the state hopes to meet its deadline.

A strong clean economy cluster also can accelerate regional decarbonization, encourage adoption of climate-ready products and services, and support entrepreneurship and small business growth related to a carbon-neutral future. As the pace of the energy transition increases, regions that invest in the clean economy will have an advantage over those that do not.

Although the Inland SoCal clean economy is still emerging, it can be positioned for rapid growth in the years ahead. State climate mandates are generating demand for clean economy goods and services that companies in the region can provide. New regional niche strengths are emerging in battery storage and energy systems technology, emissions control and remediation, advanced materials, mobility tech, and other areas. In some cases, innovators are turning to the intersection of different industries and technologies to find solutions to pressing concerns. These points of convergence are expanding innovation possibilities and opening up new markets for leading-edge entrepreneurs. By taking deliberate action to encourage innovation, startup activity, and business growth related to the energy transition, Inland SoCal can establish itself as a key node for this increasingly important cluster and encourage much-needed regional economic diversification in the process.

Inland SoCal has several important innovation assets that provide a solid foundation for the cluster. UCR anchors the cluster with a solid array of research facilities, entrepreneurial programming, and expertise that together help advance new ideas and potential solutions to pressing climate-related challenges. The university's Center for Environmental Research & Technology (CE-CERT) and the Opportunity to Advance Sustainability, Innovation, and Social Inclusion (OASIS) initiative in particular concentrate much of the innovation activity related to the clean economy.

OASIS heads a startup accelerator that is the centerpiece of the InSoCal Innovation Hub , recently designated by the California Office of the Small Business Advocate (CalOSBA) as one of the state's 13 Inclusive Innovation Hubs. Each hub aims to encourage "robust partnerships rooted in scientific and technological innovation to positively impact the economy within a geographic region, address societal challenges, and advance national competitiveness."<sup>10</sup> The InSoCal Innovation Hub will leverage existing relationships within the region's entrepreneurial ecosystem to provide comprehensive support for high-potential clean economy startups. It operates as a collaboration among the UCR EPIC Small Business Development Center, the Inland Empire Center for Entrepreneurship, the Inland Empire NavalX Tech Bridge, the Riverside Community College District, the Inland Empire Latina Business Women Association, and other regional entrepreneurial support organizations.<sup>11</sup>

Inland SoCal's growing clean economy innovation profile can also be seen in the region's involvement in the U.S. Department of Energy Manufacture of Advanced Key Energy Infrastructure Technologies (MAKE IT) Prize competition. A small consortium led by Blended Impact, a Riverside-based economic development innovation lab, is now working to attract

<sup>10</sup> Cal OSBA, "Accelerate California Inclusive Innovation Hubs." Available at <https://calosba.ca.gov/funding-grants-incentives/iHub2/> (accessed August 19, 2024).

<sup>11</sup> UCR Office of Technology Partnerships, "UC Riverside Awarded Grant Funding to Launch InSoCal Accelerate Hub, Boosting Entrepreneurship in Inland Empire" (April 15, 2024). Available at <https://ucrotp.ucr.edu/press/2024/04/15/uc-riverside-awarded-grant-funding-launch-insocal-accelerate-hub-boosting> (accessed August 19, 2024)

clean energy manufacturing firms to the region, with special emphasis on solar power, hydrogen fuel, and lithium battery production. Each focus area corresponds with a specific effort already underway in the region (i.e., UCR Solar Valley Consortium, Arches H2, Lithium Valley). Over the next five years, the consortium expects that this effort will generate at least 250 new jobs in Inland SoCal.<sup>12</sup> Blended Impact is also partnering with UCR on the InSoCal Innovation Hub, which will promote crosspollination and network building among early-stage clean innovation firms in the region.

## **Inland SoCal's growing clean innovation startup community**

Inland SoCal has a growing clean innovation startup community that encompasses a variety of technologies and specializations. Local battery technology firms Rejoule and SiLi-ion worked with advisors from UCR's Entrepreneurial Proof of Concept and Innovation Center Small Business Development Center (EPIC SBDC) to secure funding and grow their operations in the region. Both companies proved successful in their search for growth capital. Rejoule won a \$10 million grant from the U.S. Department of Energy Office of Clean Energy Demonstrations (among other funding) and SiLi-ion received \$1.3 million in grant support from the National Science Foundation and the California Energy Commission.

The City of Riverside has had particular success attracting clean economy manufacturing in recent months. California's commitment to the climate transition, the scale of the addressable market in the state, and less expensive electricity from Riverside Public Utilities are all helping raise the profile of Riverside among this segment of the economy. Voltu Motor, which makes advanced EV commercial trucks, chose Riverside for its first North America location. Similarly Ohmio, maker of connected EV shuttle buses, moved its international headquarters from New Zealand to Riverside.

Other Inland SoCal startups of note include Helicoid Industries (composites manufacturing technology), Karma Automotive (luxury electric vehicle manufacturing), and Saru Recycling (hardware and software for waste management and recycling). By connecting these early-stage clean tech firms with entrepreneurial assistance, access to capital, and opportunities to build relationships with each other, Inland SoCal can cultivate an active, innovative, and vibrant clean startup community and generate robust regional cluster growth.

*Source: UC Riverside EPIC, "Rejoule Inc. Awarded \$10,000,000 in Grant Funding," available at <https://ucrotp.ucr.edu/programs-services/entrepreneurship-support-epic>; Riverside County Innovation, "Riverside County Success Story: SiLi-ion - a UCR EPIC Company," available at <https://www.rivcoinnovation.org/success-stories/sili-ion>; Helicoid Industries, "About Us," available at <https://www.helicoidind.com/about> (accessed Jan. 16, 2025).*

Company founders and others active in the cluster point to another competitive advantage: Inland SoCal's geographic location. California's position at the vanguard of U.S. climate action holds particular appeal for clean economy entrepreneurs. State mandates are creating markets for clean economy innovations in energy production, storage, and distribution; zero-emission vehicles; fueling and charging infrastructure; and other climate-related areas. With the largest economy in the U.S. and the fifth-largest economy in the world, California offers access to a consumer base that any startup would envy. Growing numbers of foreign entrepreneurs are

<sup>12</sup> Blended Impact, "Blended Impact Announced As Phase 1 Winners of the DOE Make It Prize Strategies Track" (April 2024), available at <https://www.blendedimpact.com/news/blended-impact-announced-as-phase-1-winners-of-the-doe-make-it-prize-strategies-track> (accessed January 5, 2025).



applying to Inland SoCal startup incubator programs to get a toehold in the region so that they can then expand into California and U.S. markets. Relatively affordable commercial and industrial property, extensive logistics infrastructure, and close proximity to the Ports of Los Angeles and Long Beach further enhance the region's locational advantage by making it less expensive to build facilities and get goods to market.

Inland SoCal's logistics sector is also implicated in the region's clean economy innovation cluster. As a major employer with a massive footprint in the region, the sector represents too substantial an investment to ignore. Climate concerns and state greenhouse gas (GHG) targets reinforce this perspective given that the sector is a key source of the emissions and pollutants that lead to poor health outcomes in the region's historically disinvested communities. The energy transition offers an opportunity for the sector to rectify environmental harms and begin to repair relationships with local communities. Like the Ports of Los Angeles and Long Beach, the inland port facilities of Inland SoCal will require substantial investment and technical assistance to meet state climate goals. Lack of regulatory clarity, limited access to sufficient clean power, high capital costs, and the newness of the technology involved all complicate the situation now facing Inland SoCal logistics business owners, including many small firms and sole proprietorships with little margin to maneuver. However, although the cost of this transition will be substantial, wholesale logistics decarbonization would be an important competitive advantage for Inland SoCal and for the broader southern California goods movement sector as a whole.

### *Equity impact potential*

Widespread adoption of clean economy innovations has strong potential for equity impact in the region. These leading-edge solutions will accelerate the climate transition in Inland SoCal, lowering energy bills, reducing pollution, improving health outcomes, boosting local climate resilience, and ultimately providing a better quality of life for all residents as a result. Explicit efforts to raise awareness of these innovations and connect lower-income communities and households with mechanisms for funding and implementing these solutions will be crucial in order to maximize inclusive outcomes.

UCR's OASIS initiative will play an important role in helping this cluster reach its full equity impact potential. This public-private partnership is working to advance inclusive approaches to innovation, entrepreneurship, and workforce development that focus on sustainability, clean technology, and social inclusion in the region. This initiative brings together a number of regional efforts related to air quality, clean energy, community health, goods movement, and sustainable agriculture. OASIS activities prioritize success of underserved populations and include free training and workshops with flexible schedules, intentional outreach, and curriculum designed with underrepresented communities in mind.

### *Climate impact potential*

Where the clean economy adoption strategy aims to accelerate the regional energy transition, the clean economy innovation strategy instead focuses on boosting the discovery and development of innovative solutions that reduce climate impact and improve resilience and sustainability from the local to the global. The scale of climate impact produced by this strategy will depend on the innovations developed and their rate of adoption. Prioritizing solutions that give customers a sizable return on investment can help highlight the link between bottom-line concerns and clean innovation investments.

### *Alignment with state strategies*

This strategy advances the state's push for decarbonization and climate readiness. It aligns with the aims of the California Climate Adaptation Strategy, the California Climate Scoping Plan, and the mission of CARB. The SoCal OASIS Park and the InSoCal Innovation Hub also align with the mission of the California Office of the Small Business Advocate (CalOSBA), which works to strengthen and grow innovative, high-potential small businesses in the state. The Park is being funded in part by the University of California Inland Rising Fund (AB 2046) and the Innovation Hub has grant funding from CalOSBA.

The proposed Smart and Sustainable Transportation Alliance complements a number of state policies, regulations, and goals including the Advanced Clean Fleets and Trucks Regulations, the Medium- and Heavy-Duty ZEV programs, and Executive Order N-79-20. State regulators will have an important role to play in the Smart and Sustainable Transportation Alliance as it designs and implements a comprehensive decarbonization action plan. Collaboration on these efforts will streamline decision-making processes and help companies involved in transportation to find the most efficient path to carbon neutrality.

### *Risk factors*

Inaction on the energy transition poses the greatest threat to the region's clean economy innovation cluster. Any delays in the shift away from fossil fuels will limit market growth by reducing the sense of urgency among consumers.

Whether clean energy production, transmission, distribution, and storage can keep up with rising demand is another open question. Slow expansion of clean energy generation and delivery infrastructure will limit the scale and speed of electrification, which in turn will place an upper limit on the adoption of EVs and other clean economy innovations. The state's investor-owned utilities (IOUs) are already struggling to meet customer energy requirements, particularly when it comes to commercial and industrial consumers. California will need to mobilize and maximize all possible means of clean power generation if it expects to meet its emissions reduction goals.

In some cases, cutting-edge technology can be a tough sell, particularly when products and services have limited track records and large price tags. Uncertain which solutions will yield the greatest return on investment and fearful of the high cost of a wrong decision, many potential customers defer decision-making, which can undermine market demand to the detriment of growing clean economy startups. Making the business case for these investments and connecting customers with financial assistance will be important for driving adoption among more reluctant consumers.

Lack of early-stage capital presents another major concern for clean economy innovation in Inland SoCal. Without adequate funding, young firms struggle to conduct research, build prototypes, run demonstration projects, and scale up their operations. The newly established InSoCal Innovation Hub and other efforts to educate investors about clean economy innovation, expand the pool of available capital, and connect founders with potential funders can help create an environment that is more conducive to a healthy startup community powered by clean economy innovation.

Dramatic changes in the logistics landscape are creating other risks for the region. Customer preferences for rapid delivery have transformed the logistics industry in recent years, prompting construction of distribution centers close to end markets so that goods can be deployed immediately. On the ground, companies are adopting robotics and autonomous capabilities to

improve worker safety, boost productivity, and cope with workforce shortages. These workplace transformations will make some jobs obsolete, including many that do not meet the quality job standard. At the same time, these changes will create new jobs and increase demand for continuous workforce development to prepare workers for new technologies and processes.

As the pace of innovation accelerates, Inland SoCal has an opportunity to redefine what it means to be a western logistics gateway. By acting as a living lab for clean economy innovation, the region can adapt to the evolving logistics landscape and improve quality of life for all residents. However, to date the region's inland port facilities have been largely overlooked by the state in favor of investment in the publicly-owned Ports of Los Angeles and Long Beach. Given the outsized role that Inland SoCal plays in national and global trade flows, this oversight will need to be corrected in the years to come.

Slow development of an appropriately skilled workforce also poses a risk to strategy implementation. Industry-informed career pathway programs will be needed to increase the number of Inland SoCal residents working in in-demand quality jobs in the cluster. This need is partially addressed by the strategy for career pathways in construction and the trades detailed below (see page 88). Collaboration across a broad range of stakeholders, including private-sector employers, K-12 schools, higher education, labor, and community-based organizations, will be critical to these efforts. To ensure equitable benefit, these programs should engage workers across a broad range of education levels, with specific outreach to individuals who did not pursue a four-year degree. Training programs designed for incumbent workers in adjacent industries—including those being made obsolete by the energy transition and automation—can expand the available workforce by providing on-ramps into the cluster. Well-defined entry points and supported pathways into quality clean economy innovation jobs will ensure that Inland SoCal companies can find the workers they need when they need them.

## Tactics

Although the Inland SoCal clean economy innovation cluster is still taking shape, specializations have started to emerge in areas such as energy storage and water emissions, waste and recycling, and climate-ready building materials. Existing capabilities are combining with emerging possibilities, such as battery innovation and production in Imperial County's Lithium Valley, where UCR is co-lead on the federally designated Tech Hub. Understanding the specific capacities and demands of regional clean economy assets will help the region identify and nurture nascent opportunities in particular subsectors.

### **Lithium Valley and the Salton Sea**

Recent designation of Lithium Valley as a federal Tech Hub brought new attention to regional opportunities in the battery manufacturing supply chain. Experts believe that Lithium Valley has "the highest concentration of lithium contained in geothermal brines in the world." Demand for batteries will only rise in coming years, making the raw materials present in these brines and the battery production supply chains that they will enable more important than ever.

Lithium-ion batteries are essential to the energy transition. As the most widely-used type of rechargeable battery, they power everything from laptops and cellphones to EVs and utility-scale energy storage systems. However, despite intense domestic and global demand for

these batteries, much of the battery production supply chain resides outside the U.S., creating potential national security concerns that the federal government is keen to resolve. Fortunately, the U.S. has untapped lithium resources inside its own borders—including in the Salton Sea in California’s Imperial County—that can be used for domestic battery production. These mineral-rich, super-heated underground liquids can be processed using direct lithium extraction (DLE) methods to recover the lithium they contain. DLE methods are considered more sustainable and more environmentally friendly compared to conventional mining and evaporation ponds because they involve less land and water, a faster timeline, and a smaller carbon footprint.

In autumn 2023, the U.S. Economic Development Administration awarded \$500K to a consortium of stakeholders from academia, industry, the public sector, and nonprofits to create the Lithium Valley Clean Tech Hub. Led by Imperial County and UCR, this collaborative effort also includes CSUSB and Imperial Valley College; extraction experts Energy Source Minerals; battery manufacturers SiLi-ion, Starz Electronics, Statevolt, and Sulfuron; and battery recycler Omega Harvested Metallurgical. In addition to coordinating lab support and workforce training related to Lithium Valley activities, UCR will launch a lab at its Palm Desert campus focused on “fingerprinting” extracted lithium so that it can be traced back to its source. This facility will also provide workforce training in high-demand occupations within the industry. Investment in infrastructure (e.g., roads, water) and a comprehensive, well-coordinated economic development strategy will help these efforts realize their full potential.

As Lithium Valley continues to develop, Inland SoCal should stay alert for opportunities to contribute to this emerging battery supply chain. Whether by setting up needed career pathway programs or by supporting entrepreneurship related to battery production, the region should seek out opportunities to leverage its proximity to Lithium Valley.

*Source: Report of the Blue Ribbon Commission on Lithium Extraction in California, December 2022.*

Because clean economy innovation is an emerging cluster, evaluation at this early stage can only shed light on future possibilities and their implications for the design of specific tactics. Further work will be needed to track progress over time and devise effective mechanisms for supporting cluster growth. Deliberate, coordinated efforts to strengthen, expand, and make a name for the Inland SoCal clean economy innovation ecosystem will be needed to position the cluster for durable long-term growth.

**Clean Economy Innovation Cluster Building:** This private / public / academic collaboration will tackle issues that can benefit from regional cross-sector solutions such as cluster growth, global branding, tech commercialization, business growth acceleration, and workforce development.

- Establish a regional clean economy innovation cluster-building function that brings together leaders from industry, academia, and the public sector. This cross-sector entity (which could be housed within an existing organization) will work to support entrepreneurship, durable company growth, quality job creation, workforce development, and efforts to establish Inland SoCal as a global leader in clean economy innovation.
- Create an inventory of clean economy innovation firms and support services in the region and develop an easy-to-use online directory of regional services to assist companies in the cluster (e.g., entrepreneurial supports, mentorship, business growth advising, technical assistance, sources of capital). Consider implementing a concierge

option that provides warm handoffs to needed supports (could be sliding-scale fee-for-service to cover any costs involved).

- Assemble a detailed clean economy subsector skills report that identifies related priority occupations, in-demand skills, credentials, certifications, and existing training programs in the region as well as potential gaps and opportunities in career pathways related to the clean economy.
- Organize a team of 2-3 FTEs to conduct one-on-one customer discovery conversations to learn about firms' pressing cleantech needs and then work with companies to explore how the region's clean innovation cluster might address these needs. Use these findings to inform entrepreneur support programming, business attraction efforts, and other cluster-related economic development activities.
- Develop and implement an education strategy for investors both within and outside the region focused on increasing their familiarity with clean economy innovation investing, with emphasis on key trends, high-potential subsectors, and the unique capital needs of innovation-intensive clean economy firms.
- Craft a cohesive cluster prospectus highlighting the region's strengths in clean economy innovation. This prospectus should showcase the regional nature of the cluster, relevant assets and attributes, and the various actors involved.
- Design a comprehensive global engagement strategy focused on attracting foreign direct investment and supporting soft landings for innovative foreign clean economy firms that want to locate and grow in the region. Use findings from customer discovery conversations (above) to determine the focus of attraction efforts.
- Convene and organize an industry-led workforce collaborative to identify and improve pathways into high-demand clean economy innovation jobs in collaboration with local universities and community colleges, other training providers, labor organizations, community-based organizations, and others.

**SoCal OASIS Park:** This eight-acre project on the west edge of the UCR campus aims to leverage its proximity with CARB headquarters by co-locating CE-CERT, UCR Extension, startup incubator and accelerator programs, and partner companies. When construction is complete, the SoCal OASIS™ Park will be home to state-of-the-art applied research facilities, including a robotics lab, vehicle engineering space, and a five-in-one air quality testing chamber; a makerspace, classrooms, meeting rooms, offices, incubator spaces, and retail and community space. This varied mix of uses will attract a wide range of stakeholders, each with an important role to play. The Park will also anchor the University Avenue Innovation Corridor and the city of Riverside's Innovation District. These overlapping geographies will benefit from one another's presence, encouraging knowledge spillovers and creative interdisciplinary problem-solving.

- Complete the design-build process and secure remainder of funding required. (UCR broke ground on the Park this past December and is expected to open in 2026.)
- Design programming and engage in stakeholder development.
- Recruit industry partners to co-locate with startup companies in the Park.
- Create multidisciplinary research teams to develop and propose key initiatives related to cleantech. Share findings from customer discovery conversations with researchers to spark ideas and surface potential market-ready innovations.

- Hire and attract new faculty, industries, and startups to catalyze growth in the region.
- Collaborate and coordinate efforts with key stakeholders, including startups, researchers, academic institutions, corporate partners, and community members.
- Raise funding for community-building activities, knowledge transfer efforts, infrastructure, specialized labs, and makerspace equipment.
- Secure pre-seed and seed capital for incubator startups to fund the launch of successful pilot demonstrations at scale.
- Connect innovation-related activities at the Park with the InSoCal Innovation Hub mission and priorities. Raise awareness of the Park and the cluster more broadly by sharing success stories and data on progress to date (e.g., startups supported, jobs created, measures of equitable engagement, technologies commercialized).
- Generate momentum for Phase 2 of SoCal OASIS™ Park construction.

**InSoCal Innovation Hub (InSoCal I-Hub):** This state-designated innovation hub aims to boost innovation and entrepreneurial activity in the region, with an emphasis on providing support for promising sustainability-focused startups in Riverside and San Bernardino Counties. It houses the region’s SBIR and Build to Scale efforts, a climate startup accelerator, and the Opportunity Gateway intensive mentorship program. Building on Inland SoCal’s existing entrepreneurial support ecosystem, the InSoCal I-Hub will provide much needed connection and coordination among these organizations so that they can better serve innovative early-stage firms in the region.

- Develop proposals and budgets for each of the three I-Hub committees (infrastructure, communications, and investment).
- Secure funding to support the most promising I-Hub companies poised for growth in Inland SoCal.
- Secure funding for I-Hub operations, programming, and committee activities.

**Inland Port Modernization:** As part of the state’s decarbonization efforts, California’s ports have secured billions in federal and state funding for zero-emissions infrastructure investments and climate adaptation efforts. These funds will go a long way toward minimizing the carbon footprint of logistics activity in the state. Similar levels of investment in inland port facilities are now needed if California expects to achieve its net-zero goal.

- Support the Southern California Association of Governments (SCAG) as it works to develop a systems-level inland port plan as part of its Regional Comprehensive Goods Movement Action Plan and Implementation Strategy.
- Convene key public- and private-sector stakeholders to work with SCAG to implement its inland port plan. To start, this group will prioritize activities and investments needed, identify discrete tasks, develop budgets, establish timelines, and assign responsibilities to those involved.

**Smart Sustainable Transportation Alliance (SSTA):** This broadly representative stakeholder collective will work together to accelerate the energy transition in the regional transportation, distribution, and logistics (TDL) sector. This entity will adopt a comprehensive approach that encompasses zero-emission (ZE) technology development, sourcing, and deployment;

integrated planning for companies of all sizes; entrepreneurial support; skills training; and collaborative action. It will attend to the full range of challenges involved in transportation and goods movement today, including shifting customer preferences, climate concerns, robotics adoption, infrastructure bottlenecks, evolving skills needs, ZE technology selection and implementation, and supply chain limitations. Special attention will be paid to the needs of small businesses and independent owner-operators. SSTA will provide a forum for co-designing a path to decarbonization as well as the structure and support needed to make this goal a reality.

- Bring together key stakeholders to co-design the regional TDL sector's transition away from fossil fuels. Specific attention to the challenges faced by independent contractors and small and medium-sized companies will ensure that firms of all sizes are able to weather the energy transition successfully.
- Identify and support the development and adoption of market-ready innovations that speed the path to a net-zero TDL sector. Potential focus areas include alternative fuels, AI, battery power, cybersecurity, digitization and data sharing, energy efficiency, load optimization, and robotics and autonomous capabilities that improve worker safety and capacity.
- Establish an infrastructure taskforce to maximize regional access to state and federal funding for energy transition investments (e.g., tax credits, low-cost loans, formula spending, competitive grants).
- Encourage technology commercialization and startup growth related to the TDL transition, with tailored assistance for founders from historically marginalized groups.
- Expand the pool of skilled workers who are able to meet evolving sector needs by fostering a culture of continuous learning and connecting potential and incumbent workers with pathways into quality jobs.
- Build and strengthen relationships among key actors in industry, academia, regulatory agencies, and the community to support comprehensive planning and adoption of ZE technologies and infrastructure in an equitable and financially feasible manner.
- Hire dedicated staff to handle day-to-day SSTA operations and facilitate the co-design process. These staff will also connect stakeholders to resources, technical assistance, and trusted vendors (e.g., CEBI companies) to help them implement their decarbonization plans.

**Clean Tech Manufacturing Acceleration Initiative:** Inland SoCal is home to a burgeoning group of clean tech manufacturers working in several specializations, including electric vehicle technologies and decarbonized building materials. This initiative will encourage expansion in this sector and, over time, establish the region as a leader in clean tech manufacturing.

- Support and expand MAKE IT efforts to attract clean energy manufacturing firms to the region by securing additional resources for company incentives, outreach, and business development programming.
- Leverage the \$500 million Climate Pollution Reduction Grant (CPRG) awarded to the South Coast Air Quality Management District (SCAQMD) to attract and expand Inland SoCal production activity related to clean goods movement, building on momentum from recent clean tech business attraction wins in the City of Riverside.

- Use preliminary organizing efforts by UCR as a launchpad for convening a regional high-voltage manufacturing workforce alliance of employers, education and training providers, labor organizations, and other key stakeholders focused on expanding the pipeline for these occupations, tailoring existing programming to employer needs, and allowing companies to take advantage of economies of scale with regard to workforce training efforts.

## **Metrics**

Performance metrics may include:

- Number of clean economy startups securing capital investment
- Construction milestones for the OASIS Park buildout
- Number and type of industry partners locating in the OASIS Park
- Success of startup incubator participants
- Number of quality jobs created within the cluster
- Growth trends among clean economy innovation startups
- Demographics of founders and workers in the cluster
- Number and size of investments in inland port improvements
- Number and growth trends of clean manufacturing firms

## **Potential funding sources**

Federal and state grants, tax incentives, loan programs, and other public-sector funding mechanisms; private-sector investment; philanthropic support.



## Strategy: Clean economy adoption

*Supercharge the regional clean economy with targeted interventions to accelerate the energy transition, strengthen local businesses, and improve quality of life for Inland SoCal residents, with particular attention to communities hardest hit by climate impacts and industrial pollution.*

### Key takeaways:

- A strategic focus on clean economy adoption will enable Inland SoCal to enhance climate resilience, increase energy independence, and accelerate the transition to a carbon-neutral future.
- Several regional efforts exist to help the private and public sectors navigate the energy transition but lack coordination and alignment.
- Ensuring equitable outcomes will require the direct involvement of historically underserved communities in the region.
- An easy-to-navigate climate transition support network will ensure that Inland SoCal small businesses are able to access the assistance they need.
- Connecting local small businesses involved in the clean economy to customers in the region and beyond will make sure that they can benefit from the energy transition.
- Community solar projects on commercial warehouse rooftops can begin to compensate Inland SoCal residents disproportionately affected by logistics sprawl and related pollution.

### Rationale and other considerations

As the state's 2045 climate deadline draws closer, all of California's regions will need to accelerate the pace of clean economy solutions adoption. Momentum is already starting to build in Inland SoCal. Regional efforts to drive adoption of clean economy solutions have sprung up throughout the region to help cities and towns plan for climate action. Other organizations are working to connect Inland SoCal residents, businesses, and government agencies to the expertise and financing they need to make their climate plans a reality. Climate investments from the federal Inflation Reduction Act are helping pave the way by providing tax incentives, low-cost loans, and other funding mechanisms for energy-efficiency retrofits, renewable energy projects, electric vehicles, and environmental justice programs.

Conventional sector strategies aim to stimulate growth in a particular industry or a cluster of related industries. This strategy takes a slightly different tack by calling for a coordinated regional approach to the energy transition. The tactics included in this strategy have the potential to benefit all Inland SoCal residents, particularly those from lower-income households and historically disinvested communities most affected by climate impacts. The shift from fossil fuels to clean energy will lead to lower energy bills, cleaner air, and less pollution, all of which can have an outsized impact on struggling families' financial self-sufficiency, health outcomes, and overall quality of life.

Implementing clean economy solutions can give Inland SoCal businesses a competitive edge in the global marketplace. Aligning sustainability and climate resilience with the bottom line can

help business owners understand the logic behind investment in clean economy innovations. To take just one example, companies are using artificial intelligence to analyze and optimize their energy consumption, reducing both environmental impacts and overhead costs in the process. Seen from this perspective, the state's environmental regulations and climate targets become catalysts for energy efficiency, cost savings, and durable economic growth.

Businesses of all sizes are now looking to invest in climate action at speed in order to comply with state requirements. The capital expenses associated with these investments can be enormous, as can the cost of a bad decision. Companies located exclusively in California face the greatest burden because they cannot rely on locations outside the state to help them weather the financial strain. Lack of regulatory alignment across state agencies complicates matters further, creating a maze of standards that even well-resourced firms find it difficult to navigate.

In recent years, several regional efforts have emerged to help the private and public sectors navigate the energy transition. [Inland Regional Energy Network \(I-REN\)](#), a partnership of the Coachella Valley Association of Governments (CVAG), San Bernardino Council of Governments (SBCOG), and Western Riverside Council of Governments (WRCOG), has positioned itself as an umbrella organization for energy transition efforts in Inland SoCal. [The Inland Southern California Climate Collaborative \(ISC3\)](#) brings together government agencies, businesses, and nonprofits working to encourage equitable responses to the climate challenge. [Inland Empire Regional Energy and Climate Hub \(REACH\)](#) convenes state and local stakeholders to encourage collaboration on regional solutions related to energy, land use, and climate action. At the industry level, the [Contractors Accelerator for Climate Resilience](#) connects business owners from historically underrepresented demographics with new market opportunities related to clean energy and green infrastructure.

However, despite achieving individual successes, these activities fall short of their collective potential because they remain largely disconnected from one another. This strategy will maximize the impact of these efforts by leveraging existing capacity, improving regional coordination, and scaling effective solutions that advance the clean economy transition.

### *Equity impact potential*

The clean economy can help the region become more inclusive, climate-resilient, and broadly prosperous, but only if historically underserved communities are directly involved. State climate investments prioritize equitable outcomes in funding decision criteria to make sure that residents of these communities will benefit from any public dollars spent. Organizations with strong relationships in these communities can help ensure that these initiatives take community members' concerns and priorities as well as the specific histories and cultural knowledge embedded within these communities into account.

Collaborative efforts that bring community-based organizations together with the private and public sectors, education and training providers, unions, and other stakeholders will be better positioned to design effective outreach campaigns, develop community-informed pipelines of clean economy projects, and work with community members on pilots, workforce training programs, and demonstration projects that extend the benefits of clean economy innovation to their neighborhoods. These collaborations can also help identify local needs to be addressed through community benefits agreements related to major climate-related endeavors.

Local small and medium-sized businesses are another area of concern for equitable impact. Complying with state climate requirements can present a sizable challenge for these firms, which typically serve a local customer base and tend to have narrow profit margins with limited

expertise or resources for climate-related investments. Achieving truly equitable outcomes will require explicit outreach to and support for these businessowners.

Helping local companies tap into opportunities related to clean economy adoption also has potential for driving inclusive outcomes. Outreach to companies owned by residents of color and those from other historically underrepresented groups will help the region maximize its return on climate action by connecting them with business opportunities related to the energy transition. As these companies find new customers and grow, they will generate value and create jobs for workers in the region.

Ensuring equitable impact also requires attention to where renewable energy projects are sited, how they are funded, and who ultimately benefits. Community solar installations on commercial and industrial roofs represent an important opportunity to increase energy production and expand lower-income households' access to low-cost clean energy, all at no cost to residents and without the need for public-sector funding.

### *Climate impact potential*

At its core this strategy aims to get Inland SoCal climate-ready and bring businesses into compliance with state climate regulations. It recognizes that the region's small and medium-size enterprises (SMEs) face greater barriers in adopting innovation and offers them assistance in navigating the energy transition. It also provides a framework for helping area businesses implicated in climate action take advantage of rising market demand in the region and beyond.

Of equal importance in terms of potential impact is the strategy's call for community solar programs powered by warehouse rooftop arrays. The Center for Sustainable Energy estimates that Inland SoCal has between 282 million and 440 million square feet of warehouse rooftop that is suitable for solar installation, representing 9,600 to 15,000 GWh each year—enough to power some 1 million to 1.5 million homes. Installing rooftop solar on 14 - 21 percent of the region's warehouses could be enough to offset GHG emissions associated with warehouse energy use in Inland SoCal.<sup>13</sup> By putting the built environment to work producing clean energy, Inland SoCal can maximize clean power production to the benefit of historically disinvested communities in the region.

Taken together, these tactics can accelerate the energy transition across the regional economy. They have the potential to reduce greenhouse gas emissions, increase clean power generation, boost community energy resilience, lower utility bills, and decrease pollution (e.g., air, noise, wastewater).

### *Alignment with state strategies*

This strategy aligns with the California Climate Adaptation Strategy and the California Climate Scoping Plan. Each proposed tactic aligns with other state strategies as well. The warehouse rooftop community solar program complements the state's push for EV adoption by boosting clean energy production. It also advances the state's environmental justice commitments by making low-cost solar energy and well-paying job opportunities accessible to Inland SoCal's lower-income households.

The proposed Clean Economy Business Initiative and Small Business Climate Transition Network both support the mission of the California Office of the Small Business Advocate (CalOSBA), which works to strengthen and grow small businesses in the state. The Transition

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<sup>13</sup> Assessment by the Center for Sustainable Energy.

Network also supports compliance with the recently enacted Climate Corporate Data Accountability Act (SB 253) by preparing small Inland SoCal companies to track and share emissions data with companies in their supply chains.

### *Risk factors*

Because the energy transition is driving clean economy growth, any slowdown in the switch to clean power will have a direct effect on solutions adoption. Moving with the necessary speed and scale will require building momentum and coordinating investments and actions across the private, public, civic, philanthropic, nonprofit, and community sectors. All too often, scarce financial resources, zero-sum thinking, lack of political will, and a preoccupation with the short term have instead pushed climate action to the margins. This dynamic will need to change.

Access to clean energy will continue to define the upper limit of clean economy adoption in the region. Only electrification powered by clean energy can produce the level of emissions reductions that the state desires. Wholesale decarbonization will require a dramatic increase in clean energy generation and distribution infrastructure. New state legislation mandating the creation of a fairly compensated C&I rooftop community solar program can ensure that Inland SoCal is empowered to use all available means to increase its clean energy production.

Much of the region's economy is composed of SMEs, which tend to be more reluctant to embrace technological innovations. SMEs are rarely first adopters of new technologies given their limited resources, time, and expertise. Demonstrating that clean economy innovations makes financial sense can help overcome SMEs' tendency to stick with the status quo.

Lack of regulatory clarity places disproportionate burden on those companies least able to afford it, namely SMEs. Here again thin margins leave little time or resources for navigating complicated regulatory regimes. Likewise, firms located solely in California are at a disadvantage because they cannot rely on out-of-state operations to offset expenses involved in complying with state climate regulations. Failure to address this market imbalance could over time have a negative effect on location decisions by startups and growing firms alike.

Access to appropriately skilled workers is a binding constraint and another potential risk to clean economy adoption. Waves of worker retirements already underway and growing investment in clean economy products and services are together intensifying clean workforce demand. Fortunately, many of these positions are opportunity jobs that do not require a four-year degree and a number are in the unionized trades. Clear, well-supported pathways into these high-demand occupations and broader awareness of clean economy career opportunities will be needed to attract sufficient numbers of Inland SoCal residents to pursue careers in this cluster. (Please see Strategy: Pathways to quality jobs in construction and related trades on page 88 for additional detail).

### **Tactics**

This strategy combines three tactics, each focused on a specific challenge facing Inland SoCal with regard to the climate transition. Regional supports for smaller companies as they get themselves climate-ready, assistance for local small businesses that sell (or could sell) clean economy goods and services, and a full-scale warehouse rooftop community solar program will together accelerate climate action, bolster local small businesses, and expand clean energy production in Inland SoCal.

**Small Business Climate Transition Network:** An easy-to-navigate climate transition support network will ensure that Inland SoCal small businesses are able to access the assistance they need to become climate-ready. By leveraging existing programs and establishing new regional mechanisms for outreach, climate transition planning, technical assistance delivery, and other critical functions, the region can make sure that its smaller companies are able to navigate this disruptive period successfully.

- Support, leverage, coordinate, and scale the efforts of I-REN, ISC3, Inland Empire REACH, and other organizations working to accelerate climate action in the region.
- Launch a Small Business Climate Transition Support Network composed of key stakeholders working with Inland SoCal small businesses (e.g., business chambers, industry groups, Small Business Development Centers, entrepreneurial support organizations, community-based organizations, community banks and credit unions).
- Gather information about energy transition-related challenges facing Inland SoCal small businesses and inventory existing programs and funding mechanisms.
- Engage experts with insight into best practices and leading-edge approaches to small business climate action to share their knowledge and raise awareness of resources available.
- Map out a comprehensive, “no wrong door” approach to connect area small businesses with climate transition support.
- Explore creating a climate transition technical assistance program to match small businesses with specialists who can act as trusted advisors. The Network could purchase technical assistance services in bulk and make this help available to small businesses at low or no cost. Services likely to be in high demand include:
  - Energy audits and carbon footprint assessments
  - Goal setting and climate transition planning
  - Advising on available solutions and financing mechanisms
  - Implementation support
  - Regulatory compliance and emissions reporting assistance

**Clean Economy Business Initiative (CEBI):** Ensure that local small businesses implicated in the clean economy benefit from the energy transition by connecting them with customers in the region and beyond.

- Form a CEBI Collaborative that brings together local government, area universities, business chambers, utilities, small business support organizations, relevant community-based organizations, industry associations, capital providers, and other relevant stakeholders.
- Select one or more clean economy sectors based on existing regional strengths, potential for quality job creation, and available federal (and other) funding.
- Deconstruct the supply chain involved in delivering and maintaining specific clean economy projects within the chosen sector(s). For example, the EV charging station supply chain can be broken into a planning stage (site selection, infrastructure agreements, grid upgrades), a development stage (EV charger manufacturing, EV

charger installation), and an operations and maintenance stage (EV charger maintenance).

- Create a detailed skills report for the selected clean economy sector(s) that identifies related priority occupations, in-demand skills, credentials, certifications, and existing training programs in the region as well as potential gaps and opportunities in relevant career pathways.
- Assemble an inventory of Inland SoCal businesses that are or could be involved in some aspect of this supply chain, with particular attention to those owned by individuals from historically underrepresented groups and / or disinvested communities in the region.
- Reach out to high-potential local businesses identified through the inventory and connect them with potential customers and support services such as business plan advising, workforce training, capital access, help with manufacturing certifications, introductions to prime contractors, and access to new technologies.
- Investigate the feasibility of a regional program patterned after the U.S. Department of Energy (DOE) Mentor Protégé Program, which matches participating small businesses with DOE prime contractors. The National Renewable Energy Lab designed the program “to foster long-term business relationships between small businesses and DOE prime contractors while increasing the overall number of small business entities that receive DOE contract and subcontract awards.”<sup>14</sup>
- Explore how the \$500M in Climate Pollution Reduction Grant funding received by the South Coast Air Quality Management District (SCAQMD) can be mobilized to foster growth in Inland SoCal’s clean economy adoption cluster. These funds will be used to speed the switch to zero-emission freight vehicles, replace or retrofit trains and freight equipment, and incentivize investments in electric charging equipment. (Note: SCAQMD and its collaborators will need state support to accelerate investment in charging and hydrogen fueling station throughout Inland SoCal.)

## Case Study: El Paso Green Business Initiative

The proposed Clean Economy Business Initiative is based on a similar initiative underway in El Paso, Texas. The [Green Business Initiative](#) is an effort spearheaded by [Supply El Paso](#) in collaboration with the Nowak Metro Finance Lab at Drexel University and the Aspen Institute Latinos and Society Program. Supply El Paso’s mission is to leverage the purchasing power of anchor institutions in support of local business growth. Recognizing the economic potential of its expanding clean energy sector (particularly given that El Paso Electric purchases roughly \$500M in goods and services each year), Supply El Paso decided to focus on business opportunities being created by the energy transition.

El Paso selected regional EV charging deployment as its priority supply chain based on high availability of federal funding for deployment projects, a strong regional construction sector, and growing interest in accelerating the shift to clean energy. This focus on a specific supply chain simplifies data analytics and facilitates the creation of targeted strategies in high-potential sectors.

<sup>14</sup> National Renewable Energy Lab, “Mentor Protégé Program,” available at <https://www.nrel.gov/docs/gen/fy22/83161.pdf> (accessed July 6, 2024).

The EV charging deployment supply chain was then deconstructed into discrete stages and steps:

- Stage 1: Planning (charger site selection, infrastructure agreements, power substation upgrades)
- Stage 2: Development (EV charger manufacturing, installation, inspection, pricing)
- Stage 3: Operations and Maintenance

With this framework in hand, the group then identified the industry sectors implicated at each stage and determined the region's position in each sector based on current industrial base and growth potential. They also mapped pathways to high-demand occupations in each stage and investigated the regulatory environment that area supply chain businesses face. Interviews with customers and suppliers in each sector provided qualitative input to complement the deep quantitative analytics conducted.

The resulting assessment revealed local business opportunities related to EV charging station construction, installation, and maintenance. Drawing on insights surfaced by the assessment, Supply El Paso realized that it would need to strengthen certain career pathways, assist local installers with regulatory compliance and certification, and provide support for local firms interested in moving into these markets. By identifying a high-potential supply chain and proactively reaching out to local businesses in relevant sectors, Supply El Paso's Green Business Initiative is working to support local wealth-building, encourage entrepreneurship, and accelerate the deployment of EV charging infrastructure in the region.

*Source: Bruce Katz and Victoria Orozco, "A Green Business Initiative: How Cities Take Full Advantage of the Energy Transition," The New Localism, April 19, 2024.*

**Warehouse rooftop community solar:** A rooftop community solar initiative for commercial and industrial (C&I) buildings will generate clean energy, create jobs, and reduce utility bills for communities affected by the environmental impacts of the region's logistics sector.

- Advocate for state legislation requiring the creation of a rooftop community solar program that fairly compensates C&I rooftop solar for its benefits to ratepayers, building owners, and the environment. Until such a program is established, California will waste the energy-generating potential of hundreds of millions of C&I rooftop square footage.
- Engage community solar developers that specialize in installations on warehouses and other C&I buildings to work with building owners, community-based organizations, and community members on warehouse rooftop community solar projects. Developers and community-based organizations should also coordinate with the Clean Economy Business Initiative (see tactic above) to bring local businesses into this supply chain.
- Establish clear, well-supported pathways into high-demand jobs in C&I rooftop solar installation and maintenance, working in conjunction with employers, education and training providers, labor, and community-based organizations. Providing priority for community members who want to train for these jobs can ensure that the economic benefits of these projects accrue to those who live nearby.
- As demand for skilled solar installation professionals declines, industry, unions, community-based organizations, and other stakeholders will need to connect these workers with training opportunities that put them on a path into another quality job.

## Inland SoCal warehouses and community solar

Warehouse rooftops cover tens of millions of square feet in Inland SoCal. Although these vast expanses seem tailor-made for solar energy production, the proportion of these buildings with solar panels is still remarkably small.

A mismatch in incentives has slowed solar adoption among warehouse owners in the region. Most prefer to avoid added expenses and are deterred by the upfront cost involved in solar installation. Those who do install solar have no financial incentive to generate excess power and thus typically limit their investments to their property's energy needs. While these rationales are understandable from an individual business perspective, they ultimately result in missed opportunities for much-needed clean energy production.

Commercial and industrial (C&I) rooftop community solar offers an alternative approach. By taking on all upfront costs, C&I solar developers make solar installation far more attractive for warehouse owners. These distributed energy resources (DERs) can boost resilience in local grids—and because installation requires no more than a building permit from the local jurisdiction, C&I solar projects can come online much more quickly than other modes of energy production.

Once the installation is up and running, community members can subscribe to the power that is generated. There are no upfront costs involved in making the switch, so ratepayers of all income levels can take part regardless of whether they rent or own their home. Some projects require a certain proportion of lower-income subscribers to ensure that less affluent households have equal access to inexpensive clean energy.

Compared to the lengthy development timelines involved with wind power, utility-scale solar, and other types of renewable energy production, rooftop solar on C&I buildings offers a faster way forward. These projects create additional value by making use of the existing built environment and producing power closer to the end user, eliminating the need for expensive long-distance transmission infrastructure that takes eight to ten years on average to site, permit, and build. Furthermore, a recent study by The Brattle Group cites growing evidence that solar “in urbanized / industrial environments (e.g., parking lots, rooftops) reduces the likelihood that adverse environmental impacts will occur” as a result of installation.

Meeting California's ambitious climate goals will require a dramatic increase in the amount of clean electricity produced each day. The recent CPUC decision regarding community solar represents a major missed opportunity that will have serious repercussions on those residents with the least access to affordable clean energy. The Net Value Billing Tariff proposed by an unusual coalition of solar developers, environmental activists, homebuilders, unions, consumer advocates, and lawmakers on both sides of the aisle offers a better way forward that will maximize clean energy production and private investment to the benefit of historically disinvested communities.

The state should prioritize developing a fair compensation scheme for C&I rooftop installations so that warehouse rooftop community solar becomes the norm rather than the exception. Maryland, New Jersey, New York, and a number of other states have already taken the lead on this issue and may offer models on which to build.

*Source: The Brattle Group, "Analysis of the Incremental Value of Rooftop Community Solar + Storage in California" (June 6, 2023); Kelsey Misbrener, "Solar Industry Admonishes CPUC's Revised Proposal on Community Solar," Solar Power World (May 29, 2024); Solar Landscape, "A New Tenant Class for Maryland's Commercial and Industrial Owners Creates Revenue Opportunities" (January 25, 2024);*



## **Metrics**

Performance metrics may include:

- Number of quality jobs created that are related to clean economy adoption
- New business growth related to clean economy adoption
- Revenue growth among CEBI small business participants
- Number of companies served by the Small Business Climate Transition Network
- Demographic diversity of program participants
- Logistics sector progress on energy transition measures
- C&I solar installation square footage and total power generated

## **Potential funding sources**

Federal and state grants, tax incentives, loan programs, and other public-sector funding mechanisms; private-sector investment; philanthropic support.

## **Policy adjustments needed**

- State legislation is needed to mandate the creation of a rooftop community solar program that fairly compensates C&I rooftop solar for its benefits to ratepayers, building owners, and the environment. Compensation needs to be predictable over the long term so that solar developers can secure project financing with reasonable interest rates. Until this legislation is enacted and such a program established, the energy-generating potential of C&I rooftops will remain untapped, with significant implications for clean energy production and a negative impact on communities that lack access to inexpensive clean electricity.
- Efforts to streamline state and local regulatory regimes can be a major help for SMEs, which face a disproportionate compliance burden due to their lack of capacity and resources. These efforts can also reduce the cost of monitoring compliance by eliminating unnecessary administrative tasks and consolidating regulatory requirements and data systems across public agencies.

## Strategy: Advanced manufacturing

*Retain and modernize Inland SoCal's metals manufacturing supply chain to strengthen locally-owned small and medium-sized metals manufacturers, diversify business ownership, and improve access to opportunity jobs.*

### Key takeaways:

- Inland SoCal is one of the few places in the United States with a complete metals manufacturing supply chain: primary metals, fabricated metal products, and machinery manufacturing.
- This cluster provides opportunity jobs that are accessible to residents with varying levels of formal education and training.
- The region's logistics footprint provides a competitive advantage for area metals manufacturers moving heavy materials and products through the supply chain.
- Rising retirements among metals manufacturing workers and business owners threaten the stability of this foundational cluster.
- Maintaining and strengthening metals manufacturing in Inland SoCal will require production process modernization and decarbonization, cluster promotion efforts, succession planning that aims to diversify ownership, clear pathways into metals manufacturing careers, and greater coordination of regional economic and workforce development priorities and investments.

## Rationale and other considerations

Notwithstanding regulatory burdens associated with operating in the State of California, Inland SoCal shows strengths—and recent moderate growth—in subsectors of manufacturing and related services. These trends suggest that opportunities exist to increase the number of accessible quality and promising jobs and diversify the region's economy beyond logistics and local-serving industries.

Manufacturing accounted for 2.9 percent of regional job growth between 2012 and 2022, exceeding state and national job growth benchmarks in every part of the region except East San Bernardino County and Southwest Riverside County. When compared to Riverside peers, San Bernardino County manufacturers saw stronger performance in terms of earnings, value-added, average earnings, and productivity—also often besting national and/or state comparisons.<sup>15</sup>

In total, manufacturing accounts for some 99,000 jobs in the region, with roughly 28,000 positions (28.3 percent) qualifying as a quality job and 16,000 (16.1 percent) as a promising job.<sup>16</sup> These percentages are slightly higher than the shares of quality and promising jobs in the

<sup>15</sup> Brookings/Cities GPS analysis of Lightcast estimates.

<sup>16</sup> Brookings/Cities GPS analysis of Lightcast estimates and American Community Survey 1-year public-use microdata sample.

regional economy and in traded sectors overall and significantly exceeds the proportion found in local-serving industries.

<b>Inland SoCal</b>	<b>% Opportunity Jobs</b>
<b>Regional economy</b>	43.4%
<b>Traded sectors</b>	43.9%
<b>Local-serving sectors</b>	37.5%
<b>Manufacturing</b>	44.4%

*Source: Brookings/Cities GPS analysis of Lightcast estimates and American Community Survey 1-year public-use microdata sample.*

Regional economic and workforce development already prioritize manufacturing, providing a solid foundation on which to build:

- Riverside County, San Bernardino County, Inland Economic Growth and Opportunity, and the Inland Empire Economic Partnership all view manufacturing as a priority for regional economic development.
- Fontana Mayor Acquanetta Warren and the Fontana Chamber of Commerce have organized area employers into the Mayor’s Manufacturing Council to boost awareness of the sector’s importance and better respond to its needs.
- The cities of Riverside and Rancho Cucamonga have made manufacturing a focus of their economic development efforts.
- The Manufacturers’ Council of the Inland Empire (MCIE) convenes area manufacturing firms to promote best practices, facilitate networking, and address talent needs.
- The Inland Empire Regional Workforce Development Plan and the Inland Empire/Desert Regional Consortium both identify manufacturing as a priority sector.<sup>17</sup>
- Chaffey College’s Industrial Technical (InTech) Learning Center offers hands-on, demand-driven training for new and incumbent workers, an industrial electrical and mechanical pre-apprenticeship program, and a welding training program. InTech has worked with more than 150 employers over the last eight years, including California Steel / Nucor.<sup>18</sup>

<sup>17</sup> Inland Empire Regional Planning Unit, “Inland Empire 2021-2024 Regional Workforce Development Plan,” available at <https://mfgcouncilie.com/wp-content/uploads/2023/04/IE-Regional-Plan-FINAL.pdf> (accessed Aug. 15, 2024).

<sup>18</sup> Chaffey College, “About InTech,” available at <https://intechcenter.org/about/> (accessed Aug. 15, 2024).

- Victor Valley College’s High Desert Training Center at the Southern California Logistics Airport in Victorville offers manufacturing-focused skills training in a 26,000-ft<sup>2</sup> facility donated by local defense and aerospace consultancy Exquadrum.<sup>19</sup>
- Manufacturing has been the focus of multiple K-16 Strong Workforce Partnership projects, including efforts to expand CTE education and boost STEM exposure activities via camps and maker spaces.<sup>20</sup> STEM exposure is also a priority for both County Offices of Education.

These and other efforts are building momentum across the region’s various manufacturing industries. Regional specializations encompass a broad range of subsectors, including industrial and commercial equipment, machine components, microelectronics, instrumentation, fabricated metals, and other high-value products that are relatively competitive to make in California. These niche strengths derive in large part from the region’s legacy aerospace and defense supply chain, with some overlap with the clean economy (e.g., battery and EV production). Manufacturing in the region also includes heavier production activity with more substantial environmental impacts, such as chemicals and cement for the broader southern California market.

### **A complete regional metals manufacturing supply chain**

Inland SoCal also has a solid concentration of metals manufacturing firms that produce everything from primary metals to consumer goods. Metals foundries (NAICS 331) create the primary inputs for metal fabrication firms (NAICS 332), which craft both mass-run and bespoke parts for machinery manufacturing (NAICS 333). Together these companies supply products for original equipment manufacturers (OEMs) and tier-one suppliers across a wide range of industries, including aerospace, defense, and household appliances.

The presence of a complete metals manufacturing supply chain sets Inland SoCal apart from other U.S. manufacturing hubs. Only a handful of regions have metal foundries, fabrication shops, and machinery manufacturing facilities all located within their borders.

Though lower on the value chain than OEMs and tier-one suppliers, metals manufacturers are foundational to many other high-value production industries such as automotive, aerospace, consumer appliances, industrial equipment, and medical devices. It is essential for domestic supply chain stability, a priority for commercial and defense production, and an important though often overlooked competitive strength for the region.

Places with a complete metals manufacturing supply chain can adapt more readily to fluctuations in the economy because they can adjust rapidly to shifting market demand. They can also market themselves to OEMs and tier-one suppliers as an end-to-end turnkey supply chain solution, saving these potential customers time and money by simplifying the process of

<sup>19</sup> Manufacturers’ Council of the Inland Empire, “Victor Valley Training Center,” available at <https://mfgcouncilie.com/hdmc-training-center/>; Exquadrum, “A New Corporate Headquarters and Facility Expansion – Highlight a Year of Building for Exquadrum” (Feb. 25, 2022).

<sup>20</sup> Inland Empire / Desert Regional Consortium, “Strong Workforce Program Regional Investments Round 2 – Final Report,” (2020). Available at <https://desertcolleges.org/wp-content/uploads/2021/08/2020-05-iedrc-regional-swp-final-report-round-2-final-1.pdf> (accessed Aug. 15, 2024); IEDRC, “K12 Strong Workforce 2023-2024 (Round 6) RFA Resources,” available at <https://desertcolleges.org/k12-strong-workforce-2023-2024-round6-rfa-resources/> (accessed Aug. 15, 2024).

production contracting. In addition, successful downstream firms in the region mean more business for upstream suppliers, which compounds the benefit to the area economy.

### Priority metals manufacturing industries in Inland SoCal

Certain industries within the Inland SoCal metals manufacturing cluster passed the CJF prioritization screen (see methodology section) and met a narrower set of criteria designed to highlight industries with a definite presence in the region (more than five payrolled business locations), a sizable workforce (at least 200 jobs), and a substantial proportion of opportunity jobs (more than 42 percent). This subset of industries, listed in the table below, represents more than 13,500 jobs in the region—49.6 percent of which qualify as an opportunity job.

#### Inland SoCal priority metals manufacturing industries

NAICS	Industry	# Job Count	% Opportunity Jobs	% Quality Jobs	% Promising Jobs
331110	<b>Iron and Steel Mills and Ferroalloy Manufacturing</b> Direct reduction of iron ore; manufacture of pig iron; conversion of pig iron into steel; making steel; manufacture of shapes (e.g., bar, plate, rod, sheet, strip, wire, pipes, tubes, and electrometallurgical ferroalloys	1,220.4	60.5%	47.0%	13.5%
331210	<b>Iron and Steel Pipe and Tube Manufacturing from Purchased Steel</b> Manufacture of welded, riveted, or seamless pipe and tube from purchased iron or steel	326	60.3%	46.1%	14.3%
332311	<b>Prefabricated Metal Building and Component Manufacturing</b> Manufacture of prefabricated metal buildings, panels, and sections	508.4	43.3%	24.6%	18.7%
332312	<b>Fabricated Structural Metal Manufacturing</b> Fabrication of structural metal products, such as assemblies of concrete reinforcing bars and fabricated bar joists	1,087.0	42.7%	24.2%	18.4%
332322	<b>Sheet Metal Work Manufacturing</b> Manufacture of sheet metal work (except stampings)	1,851.0	43.5%	24.8%	18.8%
332710	<b>Machine Shops</b> Establishments primarily engaged in machining metal and plastic parts and parts of other composite materials on a job or order basis	2,519.3	51.1%	33.7%	17.4%
332721	<b>Precision Turned Product Manufacturing</b> Manufacturers primarily engaged in machining precision products of all materials on a job or order basis	752.3	47.0%	30.7%	16.2%

332996	<b>Fabricated Pipe and Pipe Fitting Manufacturing</b> Fabrication, cutting, threading, and bending of metal pipes and pipe fittings made from purchased metal pipe	284.7	49.3%	33.4%	15.9%
332999	<b>All Other Miscellaneous Fabricated Metal Product Manufacturing</b> Manufacture of various fabricated metal products	935.5	49.2%	33.4%	15.8%
333248	<b>All Other Industrial Machinery Manufacturing</b> Manufacture of various types of industrial machinery	283.1	49.2%	34.3%	14.9%
333310	<b>Commercial and Service Industry Machinery Manufacturing</b> Manufacture of commercial and service industry machinery, such as optical instruments, photographic and photocopying equipment, vending machines, commercial laundry and drycleaning, office machinery, auto maintenance equipment, and commercial cooking equipment	980.1	52.7%	34.6%	18.1%
333413	<b>Industrial and Commercial Fan and Blower and Air Purification Equipment Manufacturing</b> Manufacture of stationary air purification equipment, attic fans, and industrial and commercial fans and blowers.	329.5	49.8%	35.2%	14.6%
333415	<b>AC and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing</b> Manufacture of air-conditioning and warm air furnace equipment and commercial and industrial refrigeration and freezer equipment.	986.6	47.6%	31.7%	15.9%
333511	<b>Industrial Mold Manufacturing</b> Manufacture of industrial molds for casting metals or forming other materials, such as plastics, glass, or rubber.	401.8	51.8%	33.4%	18.4%
333514	<b>Special Die and Tool, Die Set, Jig, and Fixture Manufacturing</b> Establishments that manufacture special tools and fixtures such as cutting dies and jigs	431.1	53.6%	36.6%	17.0%
333517	<b>Machine Tool Manufacturing</b> Manufacture of metal cutting machine tools and metal forming machine tools such as punching, sheering, bending, forming, pressing, forging and die-casting machines.	324.1	51.8%	33.4%	18.4%
333996	<b>Fluid Power Pump and Motor Manufacturing</b> Manufacture of hydraulic and pneumatic pumps and motors	320.4	47.9%	32.0%	15.8%
<b>TOTAL</b>		13,541	49.6%	32.7%	16.9%

Source: Brookings/Cities GPS analysis of Lightcast estimates and American Community Survey 1-year public-use microdata sample.

## Logistics: A competitive advantage for metals manufacturing

Inland SoCal’s well-established logistics cluster provides a competitive advantage for primary metal manufacturers, metal fabricators, and machinery manufacturers in the region. Metals manufacturing firms tend to locate in places with strong intermodal logistics infrastructure. Given the weight of the items being produced, these companies use trucking and rail to move products from one stage of production to the next. Proximity to a logistics hub helps metals manufacturers develop strong regional supply chain relationships, reduce transportation costs, and expedite production and delivery.

Short-haul trucking plays a particularly important role in this value chain, as it does in much of the economy. According to the U.S. DOT Bureau of Transportation Statistics, “approximately 74.1 percent of the weight and 56.2 percent of the value of goods moved less than 250 miles between origin and destination in 2023.”<sup>21</sup> The region’s substantial short-haul trucking presence gives metals production firms more transport options, which in turn means greater flexibility and lower costs. When combined with the co-location of firms up and down the value chain, short-haul trucking makes it easier for metals manufacturers to maintain consistent production levels while minimizing shipping expenses, transportation times, and supply chain disruptions.

## Retaining Inland SoCal’s metals manufacturing base

Much of the region’s metals manufacturing base is composed of upstream small and medium-sized manufacturers (SMMs) that employ fewer than 250 workers. Within the target industries identified above, fully 99 percent qualify as SMMs. Together these companies employ more than 15,000 workers in the region, representing 93.4 percent of the cluster workforce.<sup>22</sup>

<b>Regional employment in target industry SMMs</b>		
<b>Medium</b> (51 – 250 workers)	55 firms	5,714 workers
<b>Small</b> (11 – 50 workers)	224 firms	5,377 workers
<b>Micro</b> (1 – 10 workers)	1,125 firms	4,051 workers
<b>TOTAL</b>	<b>1,404 firms</b>	<b>15,142 workers</b>

Source: Cities GPS analysis of Dun & Bradstreet data.

Unlike larger suppliers and OEMs, SMMs operate on narrow profit margins with little time or money to spare. These companies face distinct barriers to growth and competitiveness, including limited resources for investment in new processes and technologies; less internal capacity for talent acquisition, training, and retention; and difficulty accessing capital for

<sup>21</sup> U.S. DOT Bureau of Transportation Statistics, “Freight Facts and Figures” (2024).

<sup>22</sup> Cities GPS analysis of Dun & Bradstreet data. Three of the 1,410 firms identified in the target industries did not report employee counts.

expansion and facilities and equipment improvements. Difficulty evaluating solutions, lack of clarity on likely return on investment, and the high cost of making a wrong decision lead many SMMs to avoid investing in new technology altogether.

For these reasons, metals SMMs have tended to adopt innovations in energy efficiency and reduced climate impact much more slowly than firms in other industries. They often underinvest in digitalization, automation, IT infrastructure, and cybersecurity as well, resulting in lower productivity and greater risk of harm from cyberattacks.<sup>23</sup> As large downstream customers begin to require GHG emissions reporting (for those subject to California’s Scope 3 reporting requirements<sup>24</sup>) and Cybersecurity Maturity Model Certification or CMMC (for those with Defense Department contract<sup>25</sup>), the modernization imperative will only intensify.

To maintain their customer base, Inland SoCal metals SMMs will need guidance, technical assistance, and financial support to update facilities and equipment, decarbonize processes, and achieve regulatory compliance. Energy-intensive primary materials manufacturers—Iron and Steel Mills and Ferroalloy Manufacturing (NAICS 331110) and Iron and Steel Pipe and Tube Manufacturing from Purchased Steel (NAICS 331210)—face an even more acute challenge given the level of investment that will be needed to decarbonize their operations. Without access to inexpensive capital and expertise, many metals manufacturers will struggle to meet regulatory requirements. Lack of regulatory clarity and conflicting requirements complicate the situation and make it difficult for low-resource firms to avoid fines. The cost of compliance may push some firm owners to close their companies or relocate to states with less challenging regulatory environments.

Upcoming retirements also present a challenge for Inland SoCal metals manufacturers. A sizable proportion of the metals production workforce will reach retirement age in the next 10 years but at present there are not enough new workers being trained to replace them. This worker shortage limits cluster productivity at a time when institutional knowledge is being lost with each retirement.

Firms in the target industries already report difficulty finding appropriately skilled workers, despite the presence of training opportunities in the region. Despite having a high proportion of opportunity jobs, metals manufacturing industries have low salience among the general public. Few people have heard of these occupations or know someone employed in the cluster. This lack of familiarity with metals manufacturing career pathways severely limits the pool of potential workers, leaving quality and promising jobs to sit empty while struggling workers stay in lower-paying jobs with little opportunity for economic mobility.

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<sup>23</sup> Roel van den Broek and Jo Wevers, “Navigating 2024: Key Supply Chain Challenges in Metals Manufacturing” (The Logic Factory, 2024). Available at <https://thelogicfactory.com/resources/metals-manufacturing-supply-chain-challenges-in-2024/> (accessed January 10, 2025).

<sup>24</sup> SB 219 states that all US companies with more than \$1 billion in annual revenue that operate in California must report Scope 3 GHG emissions (i.e., those created by firms in the company’s supply chain) starting in 2027.

<sup>25</sup> The CMMC final rule requires that all defense contractors and subcontractors meet a defined level of cybersecurity, with three tiers of certification depending on the sensitivity of the data involved. Tampa-based managed security service provider Ridge IT predicts that “most contractors handling Controlled Unclassified Information (CUI) will need Level 2 certification, while those with Federal Contract Information (FCI) only can qualify for Level 1.” Ridge IT, “CMMC Compliance: A Definitive Guide to the 2025 Deadline” (Nov. 14, 2024) available at <https://www.ridgeit.com/what-is-cmmc-compliance-deadline-2025-guide/> (accessed Jan. 10, 2025).



Some roles will no doubt be made obsolete by advances in production technology in the coming years but many occupations will still need to be filled if the cluster hopes to maintain current levels of activity.

Many owners of metals manufacturing firms are approaching retirement age as well, leaving the future of this regional supply chain unclear. These retirements could hollow out the entire metals manufacturing cluster, with repercussions that ripple out to a wide range of other regional industries and beyond.

The challenges outlined above pose a clear danger to the health of Inland SoCal's metals manufacturing supply chain. Addressing these challenges in a holistic manner will enable the region to sustain the scale and local ownership of these critically important supply chain firms.

The region needs a focused industrial retention strategy capable of preserving and strengthening the existing metals manufacturing cluster. In contrast to a traditional cluster growth strategy, with its emphasis on innovation commercialization, startup activity, and market expansion, this strategy prioritizes maintaining the region's current position by:

- Modernizing metals SMM facilities, equipment, and production processes
- Promoting the cluster as an end-to-end turnkey supply chain solution
- Making the most of generational succession as an opportunity to diversify business ownership in target industries
- Establishing and increasing the visibility of pathways into in-demand metals manufacturing careers, with targeted outreach and support for those from historically underrepresented demographics
- Coordinating regional economic and workforce development priorities and investments to safeguard the sustainability of Inland SoCal metals manufacturing

### *Equity impact potential*

Metals manufacturing, like manufacturing more generally, has substantial potential to improve economic stability and mobility for workers who currently struggle to make ends meet.<sup>26</sup> Over 44 percent of Inland SoCal manufacturing jobs qualify as an opportunity job—28.3 percent as quality jobs and 16.1 percent as promising jobs. Almost 75 percent of these opportunity jobs are held by a worker without a four-year degree; nearly 67 percent require less than an associate degree.<sup>27</sup>

The proportions of opportunity jobs are slightly higher in the target industries identified in this strategy (see table above for a complete list). Nearly half (49.6 percent) of metals manufacturing positions are opportunity jobs—32.7 percent as quality jobs and 16.9 percent as promising jobs.<sup>28</sup> These statistics underscore the importance of this cluster as a regional source of accessible opportunity jobs. It also highlights the pressing need to plan for workforce and ownership succession given expected retirements in the years ahead.

<sup>26</sup> Brookings and Cities GPS analysis of University of Washington Sufficiency Standard and American Community Survey one-year public use microdata sample, 2019 – 2021.

<sup>27</sup> Brookings and Cities GPS analysis of Lightcast estimates and American Community Survey 1-year public-use microdata sample.

<sup>28</sup> Brookings and Cities GPS analysis of Lightcast estimates and American Community Survey 1-year public-use microdata sample.

Engagement with Thrive’s Sub-Regional Tables (SRTs) validated advanced manufacturing as a priority industry for diversifying the region’s economy and improving access to opportunity jobs, particularly for those from historically disinvested communities. Community members emphasized the importance of targeted workforce development efforts that incorporate culturally-responsive approaches and connect participants with support services in order to maximize their success. They identified a number of key activities, including outreach to raise awareness among those who may not be familiar with the cluster; specific recruitment efforts for veterans, people with disabilities, justice-involved individuals, and other priority demographics; skills-based hiring; and one-stop access to subsidized support services such as childcare and transportation assistance.

In addition to addressing many of the core concerns raised in SRT discussions, this strategy advances the community-articulated priority of maintaining local ownership of key economic assets—in this case, the metals manufacturing supply chain. Many owners of metals SMMs are reaching retirement age, creating a once-in-a-generation opportunity to diversify ownership across an entire supply chain. Assisting current owners with succession planning, connecting them with prospective owners from historically underrepresented groups, and providing ongoing support for new owners as they get on their feet will enable Inland SoCal to retain these firms and extend wealth-building opportunities to a broader demographic.

### *Climate impact potential*

Analysis conducted for Thrive Inland SoCal by the Center for Sustainable Energy (CSE) reveals that the level of emissions generated varies within each segment of the metals manufacturing supply chain.

- Firms that manufacture fabricated components and products (e.g., metal fabrication, machinery manufacturing) produce roughly 5-10 tonnes of CO<sub>2</sub>e<sup>29</sup> per job per year, a medium level of impact exceeding that of office jobs. These higher emissions primarily derive from the amount of energy needed to power manufacturing equipment.
- Foundries are high impact, producing 20-40 tonnes of CO<sub>2</sub>e per job per year due to more energy-intensive activities and high-temperature processes.
- Primary materials manufacturing (e.g., iron and steel production) rate as very high impact, with emissions of 200+ tonnes of CO<sub>2</sub>e per job per year (and in some cases much more). These emissions come from use of fossil fuels for very high temperature processes as well as from the processing of the material itself.

The energy transition will mitigate many of these climate impacts. Electrification of processes currently powered by fossil fuels, when combined with access to abundant clean energy and rapid grid expansion, will lead to an immediate reduction in the sector’s carbon footprint. Achieving maximum climate benefit will require technical assistance and targeted financial support for metals SMMs to help them navigate and afford the shift to clean energy.

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<sup>29</sup> CO<sub>2</sub>e or carbon dioxide equivalent is defined by the U.S. Environmental Protection Agency as “the number of metric tons of CO<sub>2</sub> emissions with the same global warming potential as one metric ton of another greenhouse gas.”

## *Alignment with state strategies*

Maintaining California's status as the nation's leader in manufacturing is a core priority for State economic development. The State recently identified [manufacturing as a priority sector for the California Jobs First Economic Blueprint](#). The Governor's Office of Business and Economic Development (GO-Biz) also sees [manufacturing as a focus industry](#). Firms are routinely awarded incentives under the state's signature California Competes Tax Credit, along with other tax exemptions and exclusions. Together with the California Office of the Small Business Advocate (CalOSBA), GO-Biz also leads a [Made in California initiative](#) to support California manufacturers and promote California-made products. In addition, training projects for manufacturing occupations have been recognized by the California Workforce Development Board under the State's High-Road Training Partnerships program.

## *Risk factors*

The success of this strategy will depend on the effectiveness of SMM outreach efforts. Owners of SMMs are notoriously difficult to reach. They typically lack capacity beyond what is needed for day-to-day operations, have few if any affiliations with industry groups, and have limited resources and expertise to map out a comprehensive decarbonization strategy, implement modernization measures, or engage in succession planning that prioritizes business ownership diversification.

The extent of climate impact reduction among manufacturers in the target industries also depends on the pace of the energy transition. Expanding access to critical innovations and accelerating grid expansion, investment in charging and fueling infrastructure, and clean energy production in the region will facilitate a faster shift away from fossil fuels and, by extension, more immediate reductions in poor air quality and climate-related emissions.

Highly energy-intensive industries such as Iron and Steel Mills and Ferroalloy Manufacturing (NAICS 331110) and Iron and Steel Pipe and Tube Manufacturing from Purchased Steel (NAICS 331210) may yield the greatest climate benefit from the switch to clean energy. Their ability to make this transition will depend on their access to a large and consistent supply of clean energy. Given the significant amount of power involved in these production processes, every effort should be made to maximize clean energy production and expedite construction of hydrogen fuel facilities, charging infrastructure, commercial and industrial rooftop solar installations and other Distributed Energy Resources (DERs), and sufficient grid and distribution capacity.

## **Tactics**

Inland SoCal can make the most of its metals manufacturing supply chain by adopting a holistic approach to cluster building that prioritizes five distinct yet interrelated activities:

**Capabilities assessment and cluster promotion:** Retaining the strength of the region's metals manufacturing cluster requires first assembling an inventory of area firms and assessing their capabilities and capacity. These assessments will identify existing cluster strengths and shed light on productivity challenges and investments needed to enhance the competitiveness of individual firms and the supply chains they comprise. Findings from these assessments will inform programming decisions and shape the development of a metals manufacturing cluster

*prospectus that sets out the region's distinct value proposition as an end-to-end turnkey supply chain solution for OEMs and tier-one suppliers.*

- *Assemble a regional inventory of SMMs in the target metals industries.*
- *Develop effective mechanisms for engaging with metals SMMs, which as a group tend to be difficult to reach and want to see a clear value proposition before agreeing to invest time or resources.*
- *Conduct assessments of Inland SoCal metals SMMs to better understand their capabilities, capacity, and challenges.*
- *Create a prospectus that promotes the region's metals manufacturing supply chain and highlights its capabilities for potential customers, leveraging insights from area SMM capability assessments.*

**Metals SMM modernization:** *Securing a regional competitive edge in metals manufacturing requires ongoing investment in technology and strategic collaborations that foster continuous innovation. Digitalization in particular is driving productivity growth, which in turn improves the bottom line. But when it comes to modernization, one-size-fits-all approaches fall well short of what firms need. Every company is different, with distinctive strengths and challenges that require tailored strategies, specific supports, and thoughtful implementation. A cluster-based effort to help metals SMMs modernize will boost innovation adoption and improve the capacity, capabilities, and competitiveness of the cluster as a whole.*

- *Conduct a customer discovery sprint to learn more about the pain points and specific needs of metals SMMs in the region.*
- *Analyze customer discovery findings for shared areas of concern and opportunities to advance metals SMM modernization and climate readiness efforts in the region.*
- *Work with individual firms to craft tailored competitive investment roadmaps that prioritize productivity improvements based on need and likely return on investment. Help firms choose solutions and secure resources, aggregating demand when possible to achieve economies of scale in vendor pricing.*
- *Establish an Early Alert Network patterned after Pennsylvania's successful Strategic Early Warning Network (SEWN) to help metals SMMs in need of assistance with modernization efforts, regulatory compliance, workforce development, sales and marketing, financial stabilization, and/or owner succession planning. After a free consultation and online assessment, firms will be connected with the appropriate business support services and/or technical assistance to design and implement a custom plan for addressing their core concerns. This work should build on the efforts of the California Manufacturing Technology Consulting (CMTC) and the Manufacturers' Council of the Inland Empire (MCIE).*
- *Collaborate with metals SMMs to identify productivity improvements that will increase regional supply chain competitiveness. Compile a list of possible productivity projects with detail on potential solutions and funding options to inform individual firms' competitive investment roadmaps.*

**Succession planning and ownership diversification:** The wave of retirements now underway among metals SMM owners has the potential to disrupt the component parts of the region's metals supply chain. A thoughtful succession planning initiative is needed to help business owners map out an exit strategy, connect them with potential successors, assist with the successor selection and transition process, and provide support as the new owners take over operations. These efforts should be designed with an eye toward increasing entrepreneurship and business ownership among local residents from historically underrepresented groups.<sup>30</sup>

- Create a detailed metals manufacturing subsector skills report that identifies related priority occupations, in-demand skills, credentials, certifications, and existing training programs in the region as well as potential gaps and opportunities in metals manufacturing career pathways.
- Develop a business plan, budget, and activation strategy for a regional succession planning and ownership diversification initiative for Inland SoCal metals SMMs. Assemble a team of partner organizations and advisors to inform plan design and divide up responsibilities.
- Use the Early Alert Network and other mechanisms to identify and reach out to Inland SoCal metals SMMs in need of succession planning assistance. Interested firms will sign a memorandum of understanding (MOU) with the initiative outlining activities and expectations.
- Work with firms to define requirements for a successor, assess company performance, craft an exit strategy, set a competitive price, and source and vet qualified potential successors (including individual owners, partnerships, and cooperative arrangements). Provide advice throughout the process and assist in transfer of ownership.
- Offer advisory support to the new owner for a predetermined period (typically three to six months) in order to ease the ownership transition process.

**Metals manufacturing career pathways:** Build on the region's existing baseline of manufacturing-focused workforce development efforts to expand the scale of programming and support services for metals manufacturing career pathways, deepen outreach to and engagement with historically underrepresented populations, and promote employer best practices for fostering a diverse workforce.

- Expand the scale of existing demand-driven interventions (e.g., short-term training programs, apprenticeships, labor-affiliated career pathways) that position residents without a four-year degree for middle-skill opportunity jobs in metals manufacturing. These efforts will build on programming already underway at Chaffey College's InTech Center, Victor Valley College's Victorville training center, and other community colleges in the region.
- Consider bringing together employers, training providers, unions, educators, and support service organizations to identify and respond to pressing workforce development concerns in the region's metals manufacturing cluster. Build on insights and approaches

<sup>30</sup> This tactic is modeled on the Chicago-based Manufacturing Succession Solutions (MSS) Project. Manufacturing Renaissance, "Industrial Retention Initiatives: Early Warning Network Capacity Building Project & Manufacturing Succession Solutions - Proactive Support for Legacy Manufacturing Companies," available at <https://mfgren.org/industrial-retention-initiatives-mss/> (accessed Jan. 14, 2025).

from proven models such as the U.S. Chamber of Commerce’s Talent Pipeline Management program.

- Deepen partnerships among the education and training system, Inland SoCal metals SMMs, unions, and community-based organizations in order to better reach justice-involved individuals and other priority demographics and offer culturally-responsive support services at every stage of workers’ career development journeys.
- Launch a coordinated long-term outreach campaign to raise awareness of metals manufacturing occupations among area young people. These efforts should include targeted outreach to historically disinvested communities, people of color, and other underrepresented demographics.
- Advance adoption of employer best practices for skills-based hiring, incumbent worker training, and creation of internal pathways for career advancement.
- Reduce barriers to training and employment by implementing employer-sponsored childcare, multi-employer childcare collaboratives, and other childcare solutions.
- Connect firms with relevant economic and workforce development actors such as Tomorrow’s Talent for internship and apprenticeship program development and the Employment Training Panel for incumbent worker training funds.

**Regional economic and workforce development alignment:** Engage in collaborative efforts to secure the health of metals manufacturing across Inland SoCal.

- Encourage greater engagement with metals SMMs to inform regional economic and workforce development plans, building on work initiated by the Manufacturers’ Council of the Inland Empire (MCIE).
- Convene county, local, and other economic and workforce development actors to set shared objectives and align programs and services (e.g., business attraction, retention, and expansion) in support of metals manufacturing.
- Integrate a metals manufacturing emphasis into site assembly and site readiness efforts, incentive programs, retention and expansion supports, workforce pipeline development, and other economic and workforce development activities.
- Advocate for effective policy supports and a regulatory environment that is conducive to both climate readiness and metals manufacturing cluster health.

## Metrics

Performance metrics may include:

- Number of firms that develop and implement a competitive investment plan as part of the metals SMM modernization effort
- Return on investment in modernization measures and productivity improvements
- Number of firms making use of support services and resources (e.g., Early Alert Network, Employment Training Panel funding, exports assistance).
- Number of talent pipeline program participants that pursue a metals manufacturing career pathway (disaggregated by participant demographics, including race/ethnicity, gender, veteran status, and justice system involvement).

- Number of firms adopting inclusive workforce practices (e.g., skills-based hiring, incumbent worker training, access to childcare).
- Number of OEMs and tier-one suppliers seeking contracts with Inland SoCal metals supply chains
- Business ownership transitions (with detail on demographics of successor owners)
- Number of target industry SMMs retained over one, five, and 10 years

The time horizon for this strategy’s impact largely depends on the region’s ability to marshal capacity and coordinate program delivery, activities that have historically presented a challenge in the absence of a single regional economic development organization. Some metrics may see progress fairly quickly as existing efforts ramp up, while others will first require standing up new programming, securing resources, and/or coordinating across jurisdictions and thus may not show results in the near term.

### **Potential funding sources**

In addition to CJF, a number of other public- and private-sector funding sources could help fund implementation of this strategy. In other regions, business engagement is often funded by companies that contribute resources to regional economic development organizations and chambers of commerce. The high proportion of SMMs in this cluster makes this fundraising model more challenging since smaller firms are less likely to be in a position to contribute to outside efforts. As such, the region will need to explore alternative private-sector funding mechanisms, including programming sponsored and financed by downstream OEMs and tier-one suppliers that rely on the upstream metals manufacturers being served.

Other relevant public-sector funding streams such as the California Employment Training Panel (ETP) can provide more consistent resourcing and should be braided into the overall approach for financing strategy implementation. State and federal grants and budget allocations can help jumpstart strategy implementation but should not be considered sources of long-term support.

Philanthropy can also play a role, particularly with regard to workforce activities and equity-focused initiatives. The Irvine, JPMorgan Chase, and Arconic Foundations are among the grantmaking organizations that have supported similar regional efforts in the past.

## Strategy: Cybersecurity

*Convert a burgeoning locally-grown cybersecurity talent pool into a regional specialization capable of meeting rapidly-growing demand for services that help public- and private-sector entities navigate an increasingly complex digital threat environment.*

### Key takeaways:

- Cybersecurity is a high-demand sector in our increasingly digital world. The U.S. needs about 225,000 more cybersecurity workers than are currently available.
- Inland SoCal has taken major steps to position itself as a leader in cybersecurity workforce training and possesses a formidable combination of federally endorsed cybersecurity education, sub-BA training programs, work-based learning opportunities, and relationships with key players in the public- and private-sector cybersecurity establishment.
- By coordinating cluster-building activities, solidifying niche market opportunities, investing in critical infrastructure, and continuing workforce development efforts, Inland SoCal can leverage its cybersecurity workforce strengths to boost local startup activity, encourage opportunity job creation, and advance economic diversification.

## Rationale and other considerations

Recent high-profile hackings and ransomware attacks involving hospitals, utilities, school systems, private businesses, and government institutions underscore the rapidly growing threat of virtual incursions from both private and nation-state actors and their ability to disrupt essential functions. The proliferation of these threats has, in turn, created significant demand for cybersecurity technologies and services offering protection from such attacks. Analysis by the consulting firm McKinsey & Company suggests that the global market for cybersecurity services may reach \$1.5 trillion to \$2 trillion over time, spanning segments such as data protection, email security, cloud security, identity and access management, and security and operations management.<sup>31</sup> The rapid advancement of new technologies such as artificial intelligence and virtual reality will only intensify demand.

Meeting this moment will require the rapid formation of a skilled cybersecurity workforce that can handle a wide range of functions both in-house and via third-party vendors. Unfortunately, the scale of the nation's cyber workforce continues to lag demand. In research prepared for the White House's National Cyber Workforce and Education Strategy, the labor market data

<sup>31</sup> Bharath Aiyer, Jeffrey Caso, Peter Russell, and Marc Sorel, "New survey reveals \$2 trillion market opportunity for cybersecurity technology and service providers," McKinsey & Company (Oct. 27, 2022). Available at <https://www.mckinsey.com/capabilities/risk-and-resilience/our-insights/cybersecurity/new-survey-reveals-2-trillion-dollar-market-opportunity-for-cybersecurity-technology-and-service-providers> (accessed Jan. 29, 2025).



provider Lightcast estimated that the United States had a gap of some 225,000 cybersecurity workers.<sup>27</sup>

However, Inland SoCal has strong momentum in the cybersecurity sector. Over the past 15 years, the Center for Cyber and AI (CyAI) at California State University – San Bernardino (CSUSB) has positioned the region at the forefront of cybersecurity workforce development. During this time, the Center for CyAI received high-profile federal designations from the National Security Agency, the Department of Homeland Security, and the National Science Foundation for excellence in cybersecurity education. Through these designations, the Center shapes standards and best practices in cybersecurity training nationwide. CSUSB also participates in the NSF CyberCorps: Scholarship for Service Program, which covers educational costs for cybersecurity majors in exchange for two years working in the federal government after graduation. Alongside its active engagement with the federal security establishment and other academic institutions throughout the U.S., the Center for CyAI also maintains active relationships with major private-sector cybersecurity employers such as Google, IBM, and Northrop Grumman.

The Center for CyAI is leading the statewide Workforce Innovation Tech Hubs Cyber (WITH-Cyber) initiative, a CSU system effort to establish a cybersecurity training ecosystem across all of California. These efforts complement related activities underway in the region, including the creation of a cybersecurity center and a two-year degree program at Chaffey College, certificate and associate degree programs at Moreno Valley Community College and Riverside City College, and a regional network of Cyber Hubs developed as part of the state’s Strong Workforce Program. Other signs of momentum include:

- Nearly \$1 million in federal funds for CSUSB’s Tech and Workforce Hub Project, phase one of which involved creating a local security operations center (SOC) to detect and respond to security incidents and provide hands-on learning opportunities for cybersecurity students.
- A new agreement between CSUSB and the U.S. Navy Surface Warfare Division to provide critical skills training, workforce development, and research capacity.
- Launch of a first-in-the-state program that will place hundreds of Californians in cybersecurity apprenticeships over the course of two years. This program is led by CSUSB with support from the NSA and the California Department of Apprenticeship Standards. Additional partners include the City of Moreno Valley, Loma Linda University Medical Center, Moreno Valley College, Riverside City College, Riverside County, and the San Manuel Band of Mission Indians.
- Last August saw the launch of the UC Riverside Artificial Intelligence ReSearch and Education Institute (RAISE@UCR). This interdisciplinary effort will advance the study and application of artificial intelligence (AI) and machine learning (ML), both of which are implicated in cybersecurity.

These workforce strengths are reflected in regional labor market data. Nationwide, employers are able to fill just 83 percent of open cybersecurity positions due to the persistent shortage of appropriately skilled workers. Inland SoCal by contrast has a workforce surplus, meaning that there are more than enough trained workers available to fill every open cybersecurity position in

<sup>32</sup> Lightcast, “The Lightcast Quarterly Cybersecurity Talent Report” (June 2024). Available at <https://lightcast.io/resources/research/quarterly-cybersecurity-talent-report-june-24> (accessed Jan. 29, 2025).

the region.<sup>33</sup> This labor oversupply creates possibilities for marketing Inland SoCal as a place where employers located outside the region facing cyber labor shortages can hire remote skilled workers at scale.

Although Inland SoCal lacks the concentration of innovation and commercialization seen in other cybersecurity strongholds such as the Greater Washington region, Ottawa, or The Hague, it possesses a formidable combination of federally endorsed cybersecurity education, sub-BA training programs, work-based learning opportunities, and relationships with key players in the public- and private-sector security establishment. These workforce strengths, if effectively mobilized, can provide a solid foundation for cybersecurity cluster development and startup activity in the region. By coordinating cluster-building activities, solidifying niche market opportunities, investing in critical infrastructure, and expanding work-based learning opportunities, Inland SoCal can leverage its expertise in cybersecurity workforce training and its growing cybersecurity talent base to boost local startup activity, encourage opportunity job creation, and advance economic diversification in Inland SoCal.

### *Equity impact potential*

Cybersecurity falls within the overarching category of tech-driven business services that concentrate opportunity jobs for local Inland SoCal residents. An sizable proportion of these jobs does not require a four-year degree, which makes this sector's equity impact potential particularly compelling. When combined with the trend toward skills-based hiring in cybersecurity and other tech fields, this greater accessibility can create new possibilities for those who lack formal degrees. However, the equity impact of this strategy will hinge on whether individuals from historically underrepresented groups are able to pursue these opportunities successfully.

Existing initiatives in the region emphasize the importance of early career exposure and active recruitment of a diverse student population as mechanisms for achieving more equitable outcomes. CSUSB's Center for CyAI engages in significant outreach activity in the community, hosting a [cybersecurity summer camp](#) for area high schoolers and partnering with regional workforce and education leads on engagement tools such as a "[hybrid cyber escape room](#)." As a Hispanic-Serving Institution, CSUSB has demonstrated proficiency working with Latino students, many of whom are the first in their families to pursue a postsecondary degree. CSUSB also has a chapter of Women in Cybersecurity (WiCyS), a national nonprofit organization focused on recruiting, retaining, and supporting the career advancement of women working in cybersecurity.

Another important equity consideration relates to young people's ability to find work in the region. Feedback from Thrive's SRTs stressed the importance of ensuring that Inland SoCal undergraduates are able to find jobs in the region after they complete their degrees. At present, CSUSB estimates that approximately 60 percent of its cybersecurity graduates secure relevant employment in Inland SoCal. This strategy aims to boost this percentage by supporting the sector's continued growth in the region.

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<sup>33</sup> While the average national supply/demand ratio for cybersecurity workers is 83 percent, it is 101 percent in the Riverside-San Bernardino-Ontario metro. CyberSeek, "Cybersecurity Supply/Demand Heat Map: Riverside-San Bernardino-Ontario, CA," available at <https://www.cyberseek.org/heatmap.html> (accessed Jan. 15, 2025).

### *Climate impact potential*

Like other business services industries, cybersecurity has a low GHG emissions profile that stems primarily from energy use in office buildings.<sup>34</sup> Negative impacts can be mitigated by adopting energy-efficient building standards, reducing workers' commuting distance and/or frequency, and switching to clean sources of energy.

Cybersecurity also has a role to play in advancing climate action. The digitization involved in the energy transition, though necessary, has expanded the threat environment for bad actors online. Secure power grids, solar arrays, charging and fueling stations, and other critical infrastructure will be essential if the region hopes to achieve its climate goals and get the most out of its climate investments.

### *Alignment with state strategies*

Promoting growth and pathways into cybersecurity roles that meet opportunity job standards aligns with CJF and other state initiatives that focus on connecting residents to quality, family-sustaining jobs. Cybersecurity is also a State emphasis in terms of ensuring the security of its own operations and those of other institutions and enterprises in the state economy. These activities are lead by the California Office of Emergency Services' California Cybersecurity Integration Center and the California Cybersecurity Task Force, which has subcommittees cybersecurity-related economic development, workforce development, and education.

### *Risk factors*

The greatest risk involved in this strategy stems from the region's long history of fragmentation and lack of coordination. All too often organizations with similar aims that could do more working together instead find themselves competing over scarce resources. Forging strong relationships and encouraging collaborative action will be essential for effective strategy implementation.

The extent of this strategy's equity impact will hinge on its ability to engage and support individuals from historically underrepresented groups. Outreach efforts in collaboration with community-based organizations, local leaders, and other trusted voices will be needed to reach specific target audiences. Efforts to support participant success will also be critical. Workforce training should be paired with childcare and other wraparound services so that these opportunities are accessible to a wider range of Inland SoCal residents.

This strategy calls for constructing a Secure Compartmented Information Facility (SCIF), the basic building block of the federal security establishment. Each SCIF must be sponsored by a federal agency in order to obtain accreditation from the U.S. government. The timeline for SCIF construction will depend on how quickly the region is able to secure a federal sponsor.

## **Tactics**

Each of the seven tactics detailed below addresses a critical component of a healthy regional cybersecurity ecosystem. Cluster stakeholders will determine how each tactic moves forward, developing detailed workplans, timelines, and budgets to guide their efforts.

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<sup>34</sup> Assessment by the Center for Sustainable Energy

**Build a more robust base of focused cluster-building activities** in order to strengthen and expand the Inland SoCal cybersecurity presence, market the cluster and its assets, stimulate business growth and attraction, and generate local quality job opportunities.

- Convene an alliance of existing regional cybersecurity employers, leveraging existing hubs of activity such as CSUSB to establish a center of gravity for the industry.
- Organize collective efforts to promote regional cybersecurity services to customers in markets where Inland SoCal has a cost advantage.
- Create an inventory and map of existing firms and industry assets in the region.
- Craft a cluster prospectus that articulates the region's value proposition in cybersecurity.
- Develop a focused cybersecurity business attraction, retention, and expansion strategy for the region.
- Attend trade shows, conferences, and other industry events to promote the region's cybersecurity cluster.

**Solidify niche opportunities for business development** by exploring regional strengths relative to market trends and competitors; forging strong relationships with key regional actors in federal security, gaming, critical infrastructure, and other promising industries; learning about their business needs; and working with them to determine how the region's cybersecurity cluster might address these needs.

- Organize a team of 2-3 FTEs who are proficient in customer discovery and market development activities.
- Compile a list of key actors in identified areas of interest (i.e., federal security, Tribal gaming, critical infrastructure) in the region and elsewhere (if open to remote workers).
- Reach out to key actors and schedule time for one-on-one customer discovery conversations.
- Hold customer discovery conversations.
- Analyze findings and assemble a summary of key insights that can inform business development in these niches.
- Conduct additional research as needed to refine these opportunities.
- Craft a business development game plan for each niche opportunity.
- Create activation plans and assign responsibilities.

**Explore whether an accelerator program could be used** to attract innovators, encourage cybersecurity startup activity, and enhance the global visibility of the Inland SoCal cybersecurity cluster.

- Explore successful models of accelerator programs in the U.S. and abroad (e.g., Des Moines Global Insurance Accelerator, GENIUS NY in Syracuse).
- Determine potential focus areas for an Inland SoCal cybersecurity accelerator.

- Have preliminary conversations with leaders in each focus area to explore the accelerator program concept and gauge interest in supporting / sponsoring such an effort.
- Investigate available sources of funding and potential partnerships for physical space and/or programming.
- Synthesize findings and decide whether or not to proceed.

**Build a federally sponsored Secure Compartmented Information Facility (SCIF)** to deepen engagement with the federal security establishment, attract related business activity, and provide work-based learning opportunities with value in the labor market.

- Secure a federal sponsor for the construction of a Secure Compartmentalized Information Facility (SCIF) in Inland SoCal.
- Design and construct SCIF.
- Launch SCIF operations in partnership with federal sponsor.
- Identify work-based learning opportunities for potential and incumbent cybersecurity workers.
- Leverage SCIF presence to attract firms and encourage sector growth.

**Launch a small and medium-sized business market development initiative** that pays special attention to DoD supply chain manufacturers in the region that need Cybersecurity Maturity Model Certification (CMMC).

- Conduct customer discovery conversations with Inland SoCal SME owners across a wide range of industries, including DoD supply chain firms and local-serving companies.
- Synthesize findings from conversations and use these insights to inform initiative design.
- Compile a list of area chambers, industry organizations, and other entities that work with Inland SoCal SMEs and gauge their interest in collaborating on / supporting this effort.
- Develop a targeted SME outreach and marketing strategy for the initiative.
- Design and launch a pilot initiative using minimum viable product approach to test hypotheses and iterate.
- Gather insights from pilot effort and refine initiative game plan.
- Scale up initiative.

**Host the 2025 Inland Empire California Mayors Cyber Cup** for middle school, high school, and college students in the region and maximize the workforce pipeline-building potential of this event.

- Organize and hold event.
- Conduct post-mortem and surface insights and lessons learned for next year.
- Consider rebranding / adapting messaging for 2026 to make clear the overarching aims and demographic focus of the competition.

**Expand the number of work-based learning opportunities in cybersecurity** so that more students can get hands-on experience before they graduate. Work-based learning helps connect classroom learning with real-world occupations, fostering student engagement and easing the transition from school to work in the process.

- Create a detailed cybersecurity subsector skills report that identifies related priority occupations, in-demand skills, credentials, certifications, and existing training programs in the region as well as potential gaps and opportunities in cybersecurity career pathways.
- Identify a list of target firms and conduct outreach using the work-based readiness assessment approach developed by Tomorrow's Talent.
- Engage target firms interested in offering work-based learning opportunities, using the skills report to determine which cybersecurity skills and occupations should get greater emphasis.
- Work with firms as they launch and grow their work-based learning offerings.

## Metrics

Performance metrics may include:

- Number and characteristics (e.g., company size, age, annual earnings) of cybersecurity firms in the region and change over time
- Number and characteristics (e.g., company size, age, annual earnings) of cybersecurity firms that relocate to Inland SoCal and change over time
- Number of companies engaged as part of customer discovery efforts
- Contracts signed as a result of customer discovery efforts
- Funding raised by Inland SoCal cybersecurity startups and early-stage firms
- Number of Inland SoCal cybersecurity jobs (both in dedicated cybersecurity firms and on in-house support teams), occupational trends, and change over time
- Number of training program completers (short-term certificate, associate, bachelor's, graduate)
- Percentage of program completers finding cybersecurity work in the region
- Number of cybersecurity apprenticeships in Inland SoCal
- Median starting salaries for entry-level Inland SoCal cybersecurity workers

## Potential funding sources

Inland SoCal has secured nearly \$4.5 million in strategy activation seed funding to date, including \$2 million from the State of California and \$963,000 in Congressionally directed

funding for the CSUSB Center for CyAI Tech and Workforce Hub Project, \$800K for labor market information from the IEGO Center of Excellence, and \$725,000 from the James Irvine Foundation for administrative support.

CJF Catalyst funding will help support strategy activation efforts. Other potential sources of funding include the California Employment Training Panel (ETP), California Innovation Hub (I-HUB) support, and Workforce Innovation and Opportunity Act (WIOA) funds. CSUSB has been designated a Local Education Agency, which opens access to different funding streams for workforce training and apprenticeship programming.

## Quality job access strategies

Strengthening industry clusters that are known for creating large numbers of quality jobs will go a long way towards closing the region's quality jobs gap. But these much-needed actions are only part of the solution. Expanding access to quality jobs already present in the region will be equally essential.

Deliberate efforts are needed at every stage of the education and workforce training lifecycle. From raising awareness of quality job possibilities and providing work-based learning opportunities in K-12 to connecting high schoolers and young adults with well-supported career pathways and helping incumbent workers get the training they need to advance, these strategies can expand the region's pool of skilled workers and help more Inland SoCal residents achieve the financial stability that comes with having a quality job.

### **Strategy: Robust regional education and workforce training ecosystem**

Strengthen the regional education and workforce training ecosystem to increase awareness of and access to pathways into quality jobs and opportunities for skills development and career advancement.

#### **Rationale and other considerations**

Strengthening the regional education and workforce training ecosystem will lower barriers to quality jobs for residents throughout Inland SoCal. By leveraging existing programs and forging strong partnerships among employers, K-12 schools, community colleges, unions, community-based organizations, and universities, the region can establish clear, accessible pathways into quality jobs across a variety of sectors, including healthcare, construction and the trades, information technology, and management-level roles. This collaborative approach will build connections among stakeholders while exposing young people to career possibilities early so that they can make informed decisions about their future. Efforts to challenge stereotypes about specific industries and occupations will open up a wider range of possibilities across different demographics and ensure that employers have access to a large and diverse pool of skilled workers.

Incumbent worker upskilling and mid-career retraining are also essential components of an effective workforce development ecosystem, particularly in today's rapidly evolving economy. These functions enable workers to adapt to technological advancements and industry shifts by deepening their expertise and increasing their productivity throughout their careers. Investing in ongoing workforce development and continuous learning also benefits employers by keeping their workers skills sharp and reducing turnover.

More and more workers move between occupations and industries over the course of their work lives, making the ability to acquire new skills and knowledge of paramount importance. Creating an ecosystem that supports this adaptability not only benefits individual workers by improving their job security and career prospects but also helps employers by ensuring ready access to a flexible, competent workforce that can quickly respond to changing market demands and technological innovations.



### *Equity impact potential*

A strong regional education and training ecosystem working to expand access to quality jobs will contribute to more inclusive outcomes by making it easier for all Inland SoCal residents to learn about and prepare for a quality job in the regional economy. This strategy will boost economic mobility among lower-income households while building a more diverse skilled workforce and strengthening the regional economy. This strategy will boost economic mobility among lower-income households while building a more diverse skilled workforce and strengthening the regional economy.

### *Alignment with state strategies*

This strategy aligns with state goals for promoting diversity and inclusion in high-demand sectors and complements the Regional K-16 Collaboratives program, the California Master Plan for Higher Education, the High Road Training Partnerships initiative, and other efforts to address regional workforce shortages and prepare for projected skills needs. Support from the Strong Workforce Program and the Inland Empire / Desert Region Center of Excellence for Labor Market Research will ensure continued alignment with state priorities.

## **Tactics**

**Focus the regional education and training ecosystem on establishing clear, well-supported pathways into in-demand quality jobs:** A focus on preparing area residents for quality jobs in the region will help the Inland SoCal education and workforce development ecosystem align outreach and program offerings with current and projected industry skills needs in occupations that offer residents greater financial stability and opportunities for advancement.

- Engage directly with area employers to understand current and expected skills needs.
- Consider adoption of collective approaches for convening employers and providers to identify and respond to talent needs (e.g. “talent-industry exchanges,” the U.S. Chamber of Commerce’s Talent Pipeline Management program).
- Mobilize relationships with employers, labor organizations, K-12 schools, postsecondary institutions, and community-based organizations to raise awareness of pathways into quality jobs in construction and the trades, healthcare, IT, and management-level positions.
- Build on successful models such as the Corona Norco Adult School in Corona, CA, and Kern High School District’s CTE Center in Kern County, CA.
- Cultivate industry buy-in and encourage companies to host internships and offer job placements to better support the transition from training to employment

**Expand targeted career awareness outreach and recruitment efforts throughout Inland SoCal:** Targeted outreach and recruitment efforts can raise awareness of quality job possibilities and attract a more diverse pool of potential workers from across the region. By building connections between communities and area employers, increasing people’s familiarity with different quality jobs, and encouraging historically underrepresented groups to consider pursuing a broader range of career options, Inland SoCal can help more residents get a quality job and move toward greater financial stability.

- Foster connections among key stakeholders in order to increase residents' awareness of quality job opportunities in the region, with particular attention to those from historically underrepresented groups.
- Use social media and other communication channels to ensure that all young people are aware of quality job possibilities, pathway program opportunities, and wraparound support services.
- Encourage industry partners to take part in outreach and recruitment efforts, host internships, and facilitate job placements.
- Invest in CTE programs that align with in-demand quality jobs and have had demonstrable positive effects on high school graduation rates and workforce earnings.

**Expand access to pre-apprenticeship programs:** Increase the capacity of pre-apprenticeship programs that prepare individuals for successful entry into apprenticeships. By building on established models in partnership with employers, unions, K-12 schools, universities, and community colleges, the region can widen the on-ramps to pathways into quality jobs and ensure that companies are able to meet their future workforce needs.

- Pattern regional programs after proven models such as the Northern American National Building Trades Multi-Craft Core Curriculum (MC-3)
- Encourage partnerships among employers, unions, K-12 schools, community colleges, and universities focused on raising awareness of pre-apprenticeship programming.
- Strengthen bridging programs that help high school graduates meet the requirements for enrollment in postsecondary vocational training
- Raise awareness of apprenticeships among businesses and potential learners via the IE Labor Council, community colleges in the SBCCD and RCCD, and networks like LAUNCH, the InTech (Industrial Technical Learning) Center, Northern California Apprenticeship Network (NCAN), Semi Career and Apprenticeship Network (SCAN), Grow Apprenticeship California, and the California Steel Industries Apprenticeship Program.

**Strengthen and expand education offerings related to quality job pathways:** Support work underway by county workforce development boards, community colleges, K-12, and the Cal State system by expanding university satellite campuses, online distance learning, and continuing education programs that align with in-demand quality jobs, with emphasis on those jobs that require less than a four-year degree. These efforts will provide accessible and flexible training opportunities for residents, help address low education attainment rates, and meet the demand for skilled professionals in various growing sectors.

- Expand university satellite campuses in underserved areas like Southwest Riverside and the High Desert.
- Increase awareness of and access to adult basic skills programs that combine English and math fundamentals with skills training for a specific occupation.
- Enhance online distance learning platforms to provide flexible education options, with emphasis on offerings relevant to in-demand quality jobs.

- Ensure that continuing education programs cater to the needs of working adults interested in upskilling and / or retraining.
- Connect distance learning students with wraparound services to ensure that they have the support they need to complete their program and find a job.
- Grow trade school offerings and work-based learning opportunities.
- Improve access to short-term certificate programs that are prerequisites for quality jobs by offering courses in local libraries and other public facilities.
- Strengthen CTE programs and integrate them into all area high schools' college/career readiness programs.

**Support incumbent worker upskilling and mid-career retraining:** Connect workers to upskilling and retraining opportunities that support career advancement, particularly in those sectors facing disruption due to technology adoption and increased automation.

- Raise awareness of training opportunities for incumbent workers interested in advancing within their current occupation or pursuing a different path.
- Expand access to wraparound supports for incumbent workers in training programs
- Encourage employers to embrace an ethos of continuous learning and invest in the skills of their workers in order to boost economy mobility, unlock greater productivity, and ensure that their workforce is able to adapt as technology evolves.

**Expand awareness of and access to financial assistance and wraparound services to lower barriers to participation and support success on pathways into quality jobs:**

Provide comprehensive financial assistance and wraparound supports (e.g., childcare, mental health services, transit passes, loaned technology devices) for individuals pursuing pathways into quality jobs in the region.

- Create consortia of community-based organizations to secure funding for, publicize, and deliver coordinated financial assistance and wraparound supports
- Use social media and other communication channels to raise awareness of services and supports available.
- Provide financial support for tuition, books, and other educational expenses.
- Offer childcare, mental health counseling, transportation, computers, internet connectivity, and other services to support participation in education and training programs.

**Continue to enforce anti-discrimination policies and combat implicit bias and establish mentorship programs with ongoing support services that incorporate continuous improvement and regular opportunities to gather feedback:**

Enforce anti-discrimination policies, combat implicit bias, and establish mentorship programs that offer ongoing support. By incorporating continuous improvement and regular feedback opportunities, this tactic seeks to create an inclusive and supportive environment for all individuals, particularly those from historically underrepresented communities.

- Enforce strict anti-discrimination policies and provide training to combat implicit bias in educational institutions and workplaces.
- Establish mentorship programs that connect individuals from underrepresented communities with experienced mentors.
- Incorporate continuous improvement processes and regular feedback opportunities into mentorship programs.
- Enhance familiarity with workplace norms and social connections for underrepresented communities.
- Overcome the stigma around CTE programs and ensure adequate investment to support diverse career paths.

## Metrics

Performance metrics may include:

- Enrollment and completion rates in pre-apprenticeship, workforce training, and postsecondary programs related to quality job opportunities in the region
- CTE program enrollment and completion rates, workforce outcomes
- Post-training program / pre-apprenticeship / apprenticeship placement rates
- Diversity of participant demographics
- Feedback from students and employers on program effectiveness
- Number of registered apprenticeships and host companies in the region
- Number of program participants receiving financial support and / or wraparound services
- Number of individuals participating in anti-discrimination training and mentorship programs
- Number of employers participating in anti-discrimination training and mentorship programs

## Potential funding sources

Federal and state appropriations and grant programs, in-kind donations from industry, private-sector and philanthropic support

## Strategy: Pathways to quality jobs in healthcare

Establish clear pathways into quality healthcare jobs and increase opportunities for skill development and career advancement in order to increase economic mobility in the region, particularly those from historically underrepresented and disinvested communities.

### Rationale and other considerations

The region continues to see significant growth in quality jobs related to healthcare and social assistance. Though they comprise slightly less than half of the region's nearly quarter of a million healthcare jobs, the quality and promising jobs that exist in this sector offer access to economic mobility for workers with a wide range of educational attainment, including those without a four-year degree. Many of these occupations also provide opportunities for career advancement, which allows workers to increase their financial stability and build wealth over time. When combined with efforts to diversify the region's healthcare workforce, clear pathways into quality jobs in healthcare can increase sector innovation and adaptability and address persistent practitioner shortages, which will in turn boost regional resilience.

A number of training programs in the region, including the Copper Mt. College registered nurse program and Morongo Unified K-12 pharmacy tech program, provide strong models for expansion. The UCR School of Medicine represents another important asset for healthcare workforce development. The school is ranked seventh in the nation for diversity by U.S. News and World Report, with nearly 37 percent first-generation college students and over 40 percent who identify with an underrepresented group. Meanwhile, public awareness campaigns highlighting free or low-cost training opportunities can help more residents start down the path to a quality job in healthcare while fostering a more diverse and inclusive workforce.

#### *Equity impact potential*

Expanding pathways to quality jobs in healthcare can expand economic mobility for residents throughout Inland SoCal. This strategy addresses workforce shortages and promotes diversity within the healthcare sector, fostering innovation and improving adaptability. A diverse and well-trained healthcare workforce will also better meet community needs, which in turn can improve overall health outcomes.

#### *Alignment with state strategies*

This strategy supports California's workforce development initiatives aimed at reducing unemployment and underemployment, and aligns with state goals for increasing access to quality healthcare and addressing physician shortages. This also complements state efforts to promote diversity and inclusion in the healthcare workforce.

### Tactics

**Implement clear pathways into quality healthcare jobs that encourage individuals to pursue careers in the sector:** Clear pathways into quality healthcare jobs with opportunities for advancement can help more residents achieve financial self-sufficiency and economic mobility. Growing proven programs, expanding access to nursing programs, and providing hands-on skills training will help develop a skilled healthcare workforce in the region and ensure that Inland SoCal residents have consistent access to the healthcare services they need.

- Support and expand effective programs such as the Copper Mt. College registered nurse program, the Loma Linda High School Summer Research Program, the University of California Riverside School of Medicine undergraduate internship program, the Kaiser Permanente internship program, the Mt. Sac and Bakersfield College healthcare apprenticeship programs, and the Morongo Unified K-12 pharmacy tech program.
- Create satellite nursing programs throughout the region.
- Offer internships and apprenticeships focused on practical skills training for healthcare occupations.
- Partner with local colleges, universities, and vocational schools to develop and tailor healthcare programs.
- Collaborate with healthcare unions and employers to ensure training programs meet current and future job market demands.
- Invest in curriculum development, instructor training, and state-of-the-art training facilities and equipment.
- Provide career counseling and job placement services to ensure students transition smoothly into the workforce.

**Connect people with employment search support and career training services:**

Equipping people with the skills and resources they need to navigate the job market and advance in their careers can improve job readiness among Inland SoCal residents.

- Develop and offer employment search support services, including résumé writing, interview preparation, and job search strategies.
- Engage healthcare unions to gather input on improving worker support and integrating their feedback into the program.
- Invest in resources and tools to deliver these services effectively.

**Expand career awareness and familiarity with education and training pathways other than conventional postsecondary degrees:** Broaden awareness of quality healthcare careers that do not require a four-year degree in order to attract a more diverse healthcare workforce, address regional staffing shortages, and ensure a steady supply of skilled healthcare workers.

- Develop and distribute informational materials highlighting quality job opportunities in healthcare that can be obtained through certificate courses and training programs shorter than four years.
- Provide scholarships, tuition reimbursement, and other financial incentives to reduce barriers to entry.
- Increase public awareness about free to low-cost training opportunities for healthcare jobs, starting outreach at the high school level.
- Expand academic offerings in healthcare fields, establish a four-year college, and increase funding for community colleges to train healthcare professionals in areas like clinical laboratory science and public health.

**Connect aspiring healthcare professionals with mentors in the sector:** Experienced mentors can provide important guidance, support, and advice for early-career healthcare professionals. Mentorship programs that engage experienced healthcare professionals and unions will create robust support networks for newer members of the healthcare workforce, particularly those from historically underrepresented backgrounds.

- Develop mentorship programs that pair aspiring healthcare professionals with experienced mentors.
- Encourage unions and healthcare professionals to participate in mentorship programs.
- Implement outreach initiatives to recruit mentors and mentees from historically underrepresented backgrounds.
- Provide training for mentors to ensure that they have what they need to provide mentees effective guidance and support.
- Facilitate mentor-mentee matching and track mentee progress over time.

**Increase diversity and inclusion in the region's healthcare sector by actively recruiting and supporting individuals from historically underrepresented groups:** Targeted public awareness campaigns, early career support programs, greater support for programs that promote access, and advocacy will create a more supportive, inclusive, and equitable environment for healthcare workers and patients alike.

- Actively recruit individuals from historically underrepresented groups via targeted outreach and community engagement.
- Implement multi-channel public awareness campaigns to highlight quality job opportunities in healthcare and generate interest among a diverse range of potential applicants.
- Improve early career support (e.g., schooling, wraparound services) for healthcare workers.
- Encourage healthcare systems as they implement diversity and inclusion practices.

## Metrics

Performance metrics may include:

- Enrollment, graduation, and job placement rates for program participants
- Feedback on program effectiveness from participants, employers, and unions
- Number of scholarships and tuition reimbursements awarded
- Diversity of participant demographics

## Potential funding sources

Federal and state appropriations and grant programs, private-sector and philanthropic support

## **Strategy: Pathways to quality jobs in construction and related trades**

*Raise awareness of and access to well-supported pathways into quality jobs in construction and related trades in order to build a skilled workforce that can help the region navigate the climate transition and meet the evolving needs of the regional economy.*

### **Rationale and other considerations**

Regional demand for skilled workers in construction and the trades will only rise in the years ahead, driven by a combination of climate-related activities, infrastructure investments, and residential and commercial construction as Inland SoCal continues to develop and grow. By leveraging existing community college and vocational training programs and making pathways into HVAC, plumbing, construction, and other trades more broadly accessible throughout the region, Inland SoCal can connect more residents to quality jobs and ensure that the region has sufficient skilled trades workers to tackle construction and energy infrastructure projects, building retrofits, and other activities related to climate action and regional growth.

Fostering strong pipelines into quality jobs in construction and the trades will contribute to inclusive regional economic development by providing pathways to stable employment and upward mobility for individuals from different backgrounds. These occupations offer competitive wages, benefits, and opportunities for advancement, often without the need for a four-year college degree.

#### *Equity impact potential*

This strategy aims to promote economic mobility, reduce income disparities, and create a more diverse and inclusive workforce in construction and the trades. Targeted campaigns to raise awareness of these opportunities paired with accessible programming and comprehensive support services will help potential workers learn about these possibilities and get the help they need to overcome any barriers they might face as they prepare for these jobs.

This strategy also addresses labor shortages in crucial sectors and supports long-term economic resilience. By diversifying the job market, it enhances workforce innovation and adaptability, contributing to the overall economic stability of Inland SoCal. Investing in talent pipelines for construction and trades supports small businesses and strengthens the local economy.

#### *Alignment with state strategies*

This strategy aligns with state goals to enhance workforce development in critical sectors and support the transition to clean energy. It supports California's initiatives to reduce unemployment and underemployment and complements efforts to promote diversity and inclusion in the labor market.

### **Tactics**

Implement clear pathways into quality jobs in construction and related trades: Creating clear pathways into quality jobs in construction and related trades and providing opportunities for skills development and career advancement will encourage individuals to pursue long-term



careers in these sectors by integrating robust pre-apprenticeship programs and collaborating with unions for effective job development.

- Establish pre-apprenticeship, apprenticeship, and internship programs that provide hands-on learning experiences.
- Encourage collaboration among educational institutions, unions, and employers on programs related to construction and the trades to strengthen pathways and ensure that these programs are effective and relevant.
- Provide resources for mentorship, career counseling, and job placement services.
- Invest in targeted outreach to raise awareness of these programs and opportunities across a broad range of communities and demographics.
- Provide funding for program development, including curriculum design, instructional materials, and instructor training.
- Support and strengthen outreach and programming for women in trades

**Train the workforce needed to accelerate the region’s transition to zero-emission vehicles (ZEVs):** Well-supported, hands-on training programs will put more people into quality jobs and ensure that the region has the skilled workers it needs in electrical trades, construction, and ZEV automotive technology to drive the shift away from vehicles powered by fossil fuels.

- Strengthen and expand specialized training programs in ZEV technology, electrical trades, and construction.
- Encourage partnerships among employers, local unions, and vocational schools to align training with industry needs.
- Implement internships and apprenticeships for hands-on learning experiences.
- Start career awareness and training programs in middle schools to build interest and skills early.
- Invest in targeted outreach and support services to ensure accessibility and raise awareness of quality jobs and training opportunities.

**Expand awareness of postsecondary options to include trade, technical, and vocational programs:** Increasing the visibility of regional quality jobs in construction and the trades and related training programs starting in K-12 will encourage more Inland SoCal residents to pursue pathways into these occupations. Exposing students to different career paths and giving them opportunities to acquire relevant skills before graduating from high school will increase their familiarity with career possibilities in the trades and generate interest early.

- Develop and distribute targeted informational materials highlighting various postsecondary education and training options and implement outreach initiatives to inform students and others about these programs and the career opportunities they provide.
- Conduct outreach in partnership with area schools, employers, unions, and community-based organizations to raise awareness of these opportunities, with special attention to those from historically underrepresented demographics.

- Raise awareness of these career possibilities earlier by integrating trades education (e.g., wood shop, automotive technology) into the K-16 curriculum.
- Develop and implement pre-apprenticeship programs starting in middle school.

**Actively recruit and support individuals from historically underrepresented groups and connect aspiring trades and construction professionals with mentors:** Improved recruitment, support, and mentorship programs for workers from historically underrepresented groups will help them navigate their careers and achieve their goals.

- Actively recruit individuals from historically underrepresented groups through targeted outreach and community engagement.
- Develop mentorship programs that connect aspiring professionals with experienced mentors in the trades and construction sectors.
- Collaborate with organizations like High Road Training Partnerships, the Inland Empire Labor Council, and others to design and implement comprehensive diversity initiatives.
- Provide training and resources for mentors to effectively support and guide mentees.
- Invest in outreach initiatives to raise awareness about opportunities and support available for individuals from historically underrepresented groups.
- Support and strengthen pipelines for women in trades.

**Address employment stability and develop solutions to ensure consistent employment:** Companies and unions can together improve workers' financial stability by implementing strategies to facilitate continuous employment in construction and the trades.

- Collaborate with unions and construction companies to adopt policies and practices that lead to more consistent employment for skilled tradespeople and construction workers.
- Establish a centralized job matching system to connect tradespeople with available projects quickly.
- Provide financial planning, temporary job placements, and other support services to assist tradespeople between projects.
- Invest in training programs that enhance the versatility and employability of tradespeople, making them suitable for a wider range of projects.

**Pursue Project Labor Agreements that ensure fair labor practices, local hiring, and timely project completion:** Project Labor Agreements (PLAs) are pre-hire collective bargaining agreements between developers, contractors, and labor unions that establish the terms and conditions of employment (e.g., fair wages and benefits, safe working conditions) for a specific construction project while promoting timely completion. These types of agreements and policies can also expand union contractor hiring capacity, which is necessary to increase the number of union apprenticeships in the region.

- Collaborate with local government, unions, and developers to develop consistent policies and practices around PLAs (particularly for large-scale construction and infrastructure projects)

- Promote the use of PLAs for both private- and public-sector construction projects
- Offer training and resources to help contractors learn about the benefits and requirements of PLAs in order to facilitate effective implementation
- Conduct outreach and education campaigns to inform community members about how PLAs support local employment and inclusive economic development

## **Metrics**

Performance metrics may include:

- Program enrollment and completion statistics
- Post-training job placement rates
- Diversity of program participants
- Number of scholarships and tuition reimbursements awarded for postsecondary program participants
- Number of K-16 schools offering trades education courses
- Number of K-16 students enrolled in trades education and pre-apprenticeship programs
- Number of workers participating in continuous employment initiatives
- Reduction in length of unemployment between jobs for workers participating in continuous employment initiatives

## **Potential funding sources**

Federal and state funds, private-sector and philanthropic support

## Strategy: Pathways to quality jobs in information technology (IT)

*Connect more Inland SoCal residents to well-supported pathways into quality IT jobs.*

### Rationale and other considerations

Clear, well-supported pathways into quality information technology (IT) jobs make it easier for people to prepare for and find higher-paying work ranging from IT support to data analysis to cybersecurity. Targeted outreach, industry-aligned programming, and wraparound support services tailored to the needs of those facing barriers to participation can help the region tap into a more diverse talent pool and foster innovation and creativity. Greater diversity in the regional IT workforce can not only improve economic outcomes for workers from historically underrepresented groups but also strengthen the overall competitiveness and dynamism of the sector. This strategy also expands the diversity and size of the available labor pool for innovative tech firms and a wide variety of Inland SoCal businesses seeking IT talent.

#### *Equity impact potential*

By offering tailored outreach, skills development, mentorship, wraparound supports, and financial assistance, Inland SoCal can put more residents—including those facing barriers to participation—on the path to a quality job in IT. Enhancing diversity and inclusion within IT not only fosters a more innovative and creative workforce but also ensures that historically underrepresented groups have opportunities for economic mobility and wealth-building. Over time, increased diversity within the IT sector can drive systemic change, promoting greater inclusion and representation. Ultimately, this approach strengthens the local IT industry and contributes to a more dynamic and competitive regional economy.

#### *Alignment with state strategies*

This strategy supports state goals for workforce development and economic inclusivity, and aligns with state initiatives to promote STEM education and careers.

### Tactics

**Establish clear pathways into quality IT jobs:** Well-supported pathways that incorporate hands-on learning opportunities as well as internships and apprenticeships will enable individuals to prepare for quality jobs in IT while working alongside experienced professionals. Collaboration among employers, K-12 schools, community colleges, universities, and vocational schools will help ensure that programs align with in-demand IT skills needs.

- Develop partnerships that bring together area employers, community colleges, universities, and vocational schools to create tailored training programs for high-demand IT occupations.
- Expand opportunities for students to get hands-on experience with coding, software development, robotics, and other IT-related topics starting in elementary school
- Continue to implement internships, apprenticeships, and bootcamp programs in collaboration with local governments.

**Accelerate efforts to build a diverse Inland SoCal cybersecurity workforce:** Efforts to bolster and scale the existing cybersecurity workforce pipeline will get more residents—particularly those from underrepresented groups—on pathways into quality jobs in the region. For additional detail on this tactic, please see Strategy: Cybersecurity on page 72.

## **Metrics**

Performance metrics may include:

- Program enrollment and completion rates
- Job placement and career advancement rates for pathway program completer

## **Potential funding sources**

Federal and state appropriations and grants, private-sector and philanthropic support

## Strategy: Pathways into management careers

Expand pathways into management roles by creating opportunities for skills development, leadership training, and career advancement, particularly among those from groups historically underrepresented in corporate leadership.

### Rationale and other considerations

Given the impending wave of retirements by workers from the Baby Boom generation, there is a unique opportunity to use this turnover to increase the diversity in corporate management and ensure a smooth transition and continuity in corporate knowledge and culture. Expanding opportunities for members of historically underrepresented groups to advance into management roles will increase diversity at the leadership level and help ensure that corporate decision-making reflects a wider range of perspectives and experiences. These pathways will also boost economic mobility and create wealth-building opportunities for those who pursue.

#### *Equity impact potential*

This strategy has the potential to increase diversity in the region's corporate leadership class and promote upward mobility among those from historically underrepresented groups. By providing skills development, career advancement programs, and leadership training, this strategy aims to dismantle systemic barriers that have traditionally limited the career progression of individuals from historically underrepresented communities.

Diverse leadership brings a wider range of perspectives and experiences to corporate decision-making, driving innovation and better business outcomes. Companies with diverse management teams are more attractive to a broader talent pool, enhancing their ability to recruit and retain top talent. This strategy also enhances corporate reputation and strengthens community relations, as businesses become more inclusive by finding management and leadership talent within the local labor pool.

#### *Alignment with state strategies*

This strategy supports state initiatives on diversity, equity, and inclusion and aligns with state-funded programs like High-Road Training Partnerships. It can also promote compliance with state equity and inclusion mandates.

### Tactics

**Provide clear pathways for career advancement to management:** Pathway programs that include opportunities for skills development and promotion (especially for individuals from historically underrepresented groups) can increase diversity at in corporate management

- Develop structured career advancement programs within companies.
- Offer training programs focused on management skills.

Connect individuals with mentors in management roles: Mentors in more senior management and leadership roles can offer guidance and support throughout an individual's career journey and help them navigate challenges and achieve their goals.

- Establish mentorship programs within companies and across industries.
- Train mentors on effective mentorship practices and cultural competency.
- Provide platforms (both physical and virtual) for mentor-mentee interactions.

**Encourage firms to actively recruit and support individuals from historically underrepresented groups for management roles:** Proactive efforts on the part of companies to recruit and retain management-ready workers from historically underrepresented groups will improve diversity within corporate management and create a more representative and culturally competent leadership class.

- Implement targeted recruitment strategies focused on attracting a diverse pool of high-quality candidates
- Offer workplace training on cultural competency and inclusive leadership to prepare current and future managers for the 21st-century workplace.
- Provide programming and support for new hires to ease their transition and ensure their success and retention.

**Harness generational turnover to promote more diverse ownership of local businesses:** Intentional efforts to support transfers from retiring proprietors to employee owners can both elevate new leaders and ensure the sustainability of core local enterprises.

- Engage small and medium-sized business owners around succession planning, including the potential of employee ownership
- Establish infrastructure (e.g. business education, access to financing, “managed organization” services) to support prospective employee owners.
- Provide ongoing intensive technical assistance over a multi-year period to ensure success

## Metrics

Performance metrics may include:

- Program enrollment, completion, promotion, and retention rates
- Diversity of individuals holding management roles
- Corporate success in recruiting more diverse candidates for management roles

## Potential funding sources

Federal and state funds, private-sector and philanthropic support

## Economic mobility and wealth-building strategies

The economic mobility and wealth-building strategies that follow aim to address historic, structural barriers that posed major roadblocks to finding a quality job. These strategies build on qualitative insights gathered during Phases I and II and desk research into lessons learned from past efforts promising models. They aim to support would-be entrepreneurs and local small business owners and address common barriers to quality jobs and wealth-building such as access to childcare, transportation, technology, and other resources. Special consideration is given to people of color and other historically marginalized groups in order to address specific structural barriers that impede the economic mobility and financial self-sufficiency.

### **Strategy: Entrepreneurial ecosystem for high-growth startups and main street businesses**

*Develop an inclusive entrepreneurial ecosystem capable of supporting high-growth startups and main street businesses, particularly those led by underrepresented entrepreneurs via tailored programming, access to capital, mentorship, and networking opportunities.*

### **Rationale and other considerations**

A strong entrepreneurial ecosystem is a vital component of any inclusive regional economic development strategy. When entrepreneurs start new companies, they also create jobs, new business for suppliers, and new products and services for potential customers.

Making it easier for would-be entrepreneurs to develop their ideas and launch their companies means more economic activity for the region and a chance at wealth-building for company founders. Facilitating the development and launch of entrepreneurial ventures stimulates economic activity and provides access to wealth-building opportunities. Efforts to lower barriers to participation can help those from historically underrepresented groups that were systematically excluded from entrepreneurial opportunities in the past. Tailored programs that address specific challenges and offer targeted support can help a broader range of Inland SoCal residents start and run successful businesses in the region.

Inland SoCal has a wide variety of entrepreneurial support resources, including the Inland Empire Center for Entrepreneurship (IECE)—one of the largest university-based Centers for Entrepreneurship in the world, the globally recognized CSUSB School of Entrepreneurship (SoE), which remains the first and only school of its kind in the state, the UCR Entrepreneurial Proof of Concept and Innovation Center (EPIC), Riverside’s EXCITE incubator for science and technology startups, and the Murrieta Innovation Center for medical technology entrepreneurs. Some organizations in the region, including the National Latina Business Women Association Inland Empire (NLBWA-IE), the Inland Empire Women’s Business Center, and the Black Chamber of Commerce Inland Empire, serve founders and business owners from particular demographics in order to better address their specific needs.

However, despite this wealth of assets and a willingness to work together on shared goals, the region’s entrepreneurial ecosystem does not operate as well as it could. Limited resources, competing ideas about which activities and sectors to prioritize, a small regional investor pool, and a lack of routinized, ongoing engagement among stakeholders have hampered the region’s



efforts to increase high-growth startup activity. In low-resource environments, strategic alignment is essential for maximizing return on investment and generating economies of scale. Establishing mechanisms to encourage active, ongoing communication and coordination will help actors in the entrepreneurial ecosystem transform their currently collegial relationships into effective, long-term collaborations

This strategy will generate entrepreneurial activity in the region using established models and programs that meet the needs of high-growth startups as well as main street businesses, with additional support for founders from historically underrepresented groups. It will strengthen the regional network of entrepreneurial support organizations (ESOs), local chambers of commerce, community organizations, and other stakeholders working to support entrepreneurial activity in Inland SoCal. It will also reinforce entrepreneurship and company growth in the region's emerging clean economy, cybersecurity, and advanced manufacturing clusters.

### *Equity impact potential*

A robust and broadly inclusive entrepreneurial ecosystem will increase startup activity, spark job creation, and boost economic growth, with knock-on benefits for the entire region. Specific efforts to address the distinctive challenges faced by founders from underrepresented groups will help lower barriers to participation and expand the region's pool of entrepreneurs, creating new possibilities for wealth building and innovative business growth in the process. Ultimately, fostering a stronger and more diverse entrepreneur community will make the regional economy more dynamic and more competitive while ensuring that all residents of Inland Southern California have the opportunity to contribute to and benefit from economic prosperity.

### *Alignment with state strategies*

This strategy supports California's initiatives to expand entrepreneurship and innovation and complements state efforts to invest in emerging high-potential industries markets. It also aligns with state goals to promote diversity and inclusion in economic development efforts.

## **Tactics**

**Innovation-Intensive Entrepreneurial Ecosystem Collaborative:** This collaboration brings together a core group of core partners to develop and implement a focused regional strategy to boost innovative-intensive entrepreneurship and accelerate high-potential startup growth, with specific outreach and programming to reduce the barriers faced by founders from historically underrepresented groups. Working across a spectrum of concerns (research and development, innovation commercialization, workforce development, diversity and inclusion), the Collaborative will align assets and coordinate program offerings to better support growing companies in high-potential innovation-intensive sectors.

- Assess the region's assets and capabilities to determine which sectors have the greatest potential for high-growth entrepreneurship that results in quality job creation.
- Create and maintain inventories of potential opportunities (gaps and pain points identified by industry partners) and available intellectual property (IP).
- Establish an IP policy that outlines the region's approach to innovation commercialization and ensures regional cooperation among policymakers, research institutions, and innovation-intensive firms.

- Inventory organizations and programs focused on innovation-intensive entrepreneurship and identify challenges, gaps, and opportunities to expand effective programs in the region.
- Strengthen the local investor network and attract outside funding sources to the region.
- Identify specific knowledge, skills, and training in demand among innovation-intensive startups and create clear, well-supported pathways into these careers.
- Develop a regional strategic plan for increasing innovation-intensive entrepreneurship and encouraging firm growth in high-potential industries

**Improve access to capital and expand capacity-building programs for entrepreneurs facing barriers:** Tailored capital access programs and capacity-building initiatives will better meet the needs of entrepreneurs from historically underrepresented groups by providing training on financial management, marketing, and business planning that accounts for the specific challenges they face. In addition, advocating for policy changes to address discrimination in lending and providing legal assistance for entrepreneurs facing discrimination and other challenges will foster a supportive community that encourages collaboration and resilience.

- Expand access to financial management training, marketing skills, and business planning workshops tailored to the needs of entrepreneurs from historically underrepresented groups
- Implement capacity-building initiatives that help entrepreneurs determine unmet needs and create viable business plans that meet those needs.
- Provide financial assistance and wraparound services such as childcare, mental health support, transportation, technology access, and legal assistance for entrepreneurs working to launch their businesses.
- Develop targeted funding initiatives and financial literacy programs.
- Encourage and support entrepreneurship among older adults interested in starting a business.
- Advocate for policy changes to address discrimination in lending and provide legal support for entrepreneurs facing discrimination.

**Improve access to support for entrepreneurship and business success, with specific attention to the needs of entrepreneurs and small business owners from historically underrepresented groups:** Designing these supports with historically underrepresented entrepreneurs in mind can help address barriers that hinder their ability to start, sustain, and grow successful businesses

- Develop and offer mentorship programs with mentors from similar backgrounds to provide relevant support and guidance.
- Organize training programs on business fundamentals such as financial management, marketing, and business planning.
- Develop targeted funding initiatives to assist entrepreneurs facing barriers to capital access.

- Facilitate networking and community engagement activities to connect entrepreneurs with potential collaborators, customers, and supporters.
- Strengthen relationships among local chambers of commerce, small businesses, and community organizations.
- Provide networking opportunities for older adults interested in becoming small business owners.
- Launch an accelerator program to support and attract entrepreneurship in cybersecurity.
- Promote swap meets and flea markets as platforms for community engagement and business growth. These venues can provide strong local community connections, business opportunities, and a platform for cultural exchange.

### **Raise awareness and support the growth of co-ops via entrepreneurship and**

**succession planning efforts:** Co-ops provide shared resources, democratic decision-making, and mutual support, improving access to capital, training, and market reach while fostering community engagement and resilience. More widespread adoption of this model can help address systemic barriers to wealth-building and create a more collaborative environment for business growth.

- Encourage legacy businesses to consider conversion to a worker-owned cooperative as a viable strategy for succession planning
- Establish startup studios for co-op ventures that provide co-working spaces, meeting rooms, training, and event venues.
- Focus on community-oriented strategies and leverage local organizations for support.
- Raise awareness of the benefits of implementing democratic decision-making processes within co-ops to encourage inclusive participation.

### **Showcase a broad spectrum of entrepreneur success stories to provide models for**

**others to follow:** Highlighting the successes of Inland SoCal entrepreneurs from different backgrounds will help inspire would-be founders to launch their own businesses.

- Identify and document success stories from a wide range of entrepreneurs throughout the region, tailoring stories to reflect the local culture and communities.
- Create videos, social media posts, and other forms of multimedia content based on these stories and distribute across multiple channels.
- Use content created to reinforce the message that Inland SoCal offers a healthy environment for entrepreneurs looking to grow their businesses
- Organize events and workshops where successful entrepreneurs can share their experiences and insights.

## **Metrics**

Performance metrics may include:

- Participation in entrepreneur support programs
- Number of program participants receiving financial assistance and/or legal support

- Diversity of participant demographics
- Participant feedback on programs and services
- Number of entrepreneurs who are successful in securing capital (with cross-tab analysis that looks at race, gender, and age)
- Number of entrepreneurs participating in co-op initiatives and startup studios

### **Potential funding sources**

Federal and state appropriations and grant programs, private-sector and philanthropic support

## Strategy: Access to technology

*Bridge the digital divide in Inland SoCal by improving internet connectivity, providing access to digital devices, and offering digital literacy programs to ensure everyone can participate in the digital economy.*

### Rationale and other considerations

All sorts of activities—searching for a job, paying bills, obtaining government services—now require internet access and some level of digital literacy. Unfortunately, the digital divide remains a challenge for some, particularly those from low-income households and rural communities. According to the U.S. Census, more than 90,000 Inland SoCal residents do not have an internet subscription. Improving internet connectivity and access to digital devices will advance inclusive regional economic development by ensuring that everyone has the resources and skills they need to make use of technology in their daily lives, pursue education and training online, and take advantage of hybrid and remote work opportunities.

#### *Equity impact potential*

This strategy will improve equity by ensuring that all residents—particularly those from historically underserved and under-resourced communities—have the tools and skills they need to participate in the world online. Continued investment in broadband infrastructure and digital inclusion programs will expand internet access in underserved areas, creating a more connected and resilient region. Subsidized internet access and refurbished devices, device lending programs, free computer labs, digital skills training, and mobile technology units will all work to bring essential digital resources to remote and underserved areas so that no community is left behind.

#### *Alignment with state strategies*

This strategy supports state goals for digital inclusion and broadband expansion. It also aligns with initiatives to improve educational outcomes and workforce readiness.

### Tactics

Invest in broadband infrastructure and advocate for digital inclusion: Infrastructure investments and government efforts to prioritize digital inclusion can expand broadband access in underserved areas and address the digital divide.

- Invest in broadband infrastructure projects to expand access in underserved areas.
- Advocate for government programs and policies that support digital inclusion and address the digital divide.

Subsidize access to high-speed internet and digital devices: Subsidized internet access and refurbished devices can help ensure that low-income families have the necessary tools to participate in the digital economy and access essential services.

- Implement subsidized internet access programs.

- Collaborate with technology companies to secure donations of refurbished devices.
- Establish partnerships with local organizations to distribute these resources.
- Offer digital skills training to ensure that recipients of subsidized internet and devices can use these tools for education, employment, and accessing essential services.

**Expand free community technology resources:** Bridge the digital divide by establishing community centers with free computer labs and Wi-Fi access and partnering with local libraries to create laptop and tablet lending programs. These resources will provide essential technology access and support to underserved communities, enabling them to participate in the digital economy and access vital services.

- Establish community centers with free computer labs and Wi-Fi access.
- Partner with local libraries to create laptop and tablet lending programs.
- Secure funding for the purchase and maintenance of digital devices and infrastructure.
- Provide digital literacy training and technical support at community centers and libraries.

**Expand digital skills training:** Enhance digital skills in underserved communities by offering technology training workshops and classes and improving access to affordable or free software and online tools for skills development and entrepreneurship.

- Develop and implement technology training workshops and classes focused on digital skills.
- Collaborate with the San Bernardino and Riverside Workforce Development Boards, Small Business Development Centers, educational institutions, nonprofits, and technology companies to provide affordable or free access to essential software and online tools.
- Create collaborative work/play spaces with public-private partnerships such as UCR's OASIS where caregivers can charge their vehicles while their children participate in afterschool technology programs.
- Secure funding to support these initiatives through grants, partnerships, and donations.
- Promote critical thinking around digital literacy

**Implement mobile technology solutions:** Deploying mobile technology units will bring internet access and technology resources directly to remote and underserved areas, ensuring that residents have the tools and connectivity they need for education, employment, and daily activities.

- Design and deploy mobile technology units equipped with Wi-Fi, computers, and other essential digital tools. This involves outfitting vehicles with solar panels for sustainable power, high-speed Wi-Fi routers, computers, and other digital tools. These units should be equipped with ergonomic workstations and secure storage for equipment.
- Partner with local clean energy providers such as SoCal Edison to create combined work/play spaces that can support mobile units. Equip mobile technology units and fixed spaces with solar panels, charging stations, and energy-efficient infrastructure.

- Develop a schedule and route for mobile units to ensure they reach various remote communities regularly. Deploy the units on a regular schedule to underserved and remote areas, ensuring they are accessible during peak community usage times.
- Secure funding for the initial purchase, maintenance, and operation of the mobile units through grants and partnerships via nonprofits collaboration with local governments, technology companies, and community-based organizations and/or via federal grants tied to the Digital Equity Act or grants from the FCC and/or via state or local funding.
- Implement at the county or regional level to target deployment based on specific local needs and conditions, depending on each area's specific challenges.

**Encourage employer-supported tech access:** Encouraging employers to provide technology allowances or reimbursements for remote work setups and collaborating with tech companies to donate refurbished devices can help bridge the digital divide that afflicts underserved and low-income communities in the region.

- Encourage employers to offer technology stipends or reimbursements for remote work expenses.
- Partner with technology companies to secure donations of refurbished devices.
- Establish programs for distributing donated devices to communities in need.
- Employers gain improved employee productivity, access to more diverse talent, more employee retention and satisfaction, an enhanced reputation for social responsibility and commitment to DEI goals, and possible grants/subsidies/tax deductions.

## Metrics

Performance metrics may include:

- Number of low-income households with internet access (by collaborating with school districts to gather data on students' home internet access or via local surveys fielded by local nonprofits or community centers like the IELCC)
- Number of devices distributed to low-income households
- Number of devices borrowed from lending programs
- Number of individuals using community center computer labs and wifi
- Number of individuals completing a digital skills training workshop or class
- Number of individuals accessing distributed software and online tools
- Number of and usage statistics on community locations that provide free internet access
- Number of mobile technology units deployed and areas served
- Number of people using mobile technology units
- Number of employers providing technology allowances or reimbursements
- Number of refurbished devices collected and distributed
- Number of broadband connections established in previously underserved areas

- Amount of funding secured for broadband infrastructure projects

### **Potential funding sources**

Federal and state appropriations and grants, private-sector and philanthropic support



## Strategy: Access to transportation

*Reduce barriers to accessing education and quality jobs, increase economic opportunities, enhance community engagement, and improve access to transportation by expanding public transit options, creating pedestrian-friendly areas, and establishing transit-oriented industries.*

### Rationale and other considerations

Lack of reliable transportation poses significant barriers to economic mobility in Inland SoCal by limiting access to education, training, and quality job opportunities. In a region where many people rely on cars to get around each day, limited public transit options and lack of access to a car make it harder to get and keep a job. This is especially true in Inland SoCal's more rural areas. Consistent access to transportation makes it easier for people to get to school and work, run errands, and take care of other activities of daily life. It ensures that people can participate in the economy and the world around them, which contributes to more inclusive and broadly prosperous communities.

#### *Equity impact potential*

Enhancing transportation access will ensure that all residents, including those from under-resourced communities, have reliable means to reach essential services and quality job opportunities.

#### *Alignment with state strategies*

This strategy supports California's goals for sustainable development and reducing greenhouse gas emissions, and aligns with state initiatives to promote public transit and active transportation (biking, walking). It also complements efforts to create livable, pedestrian-friendly communities.

### Tactics

Continue to invest in regional transportation infrastructure, including bike lanes, pedestrian pathways, and smart transit technologies: Consistent support for the development and maintenance of this infrastructure will expand transportation options and improve physical mobility for residents throughout Inland SoCal.

- Support implementation of Connect SoCal 2024, the Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS) from the Southern California Association of Governments (SCAG) that maps out a comprehensive suite of investments and activities to improve transportation access, reliability, and sustainability.

**Provide need-based subsidies or vouchers for public transportation, car ownership, and gas expenses:** These solutions address the challenge of limited access to affordable and reliable transportation, which restricts economic mobility, job access, and participation in education and essential services, particularly for low-income and underserved populations.

- Implement a subsidy or voucher program for public transportation, similar to Philadelphia's Zero-Fare Policy.

- Develop a car ownership program modeled after Vehicles for Change, which repairs donated cars and provides low-cost loans and sliding-scale pricing to accommodate different levels of need.
- Offer need-based gas subsidies to assist those who rely on personal vehicles for commuting.

**Support new and existing ride-sharing and carpooling programs:** These initiatives can expand transportation options and reduce costs for commuters, especially those who have few public transit options.

- Implement ride-sharing programs similar to BlueLA, which focuses on electric vehicles to promote environmental sustainability.
- Create carpooling incentives such as priority parking, reduced toll fees, and other financial rewards.

**Educate employers on the benefits of providing employee transportation subsidies, shuttle services, and flexible work arrangements:** Expanding workers' transportation options increases access to job opportunities and reduces daily single-driver commutes.

- Encourage employers to offer transportation benefits such as subsidized transit passes and ride-sharing options.
- Develop employer-sponsored shuttle services to key employment hubs.
- Implement flexible work arrangements, including remote work and staggered shifts, to reduce peak-hour commuting.
- Partner with agencies to help individuals obtain driver's licenses, such as the California Indian Manpower Consortium.

**Increase the number of electric vehicle (EV) charging stations throughout Inland SoCal:** Greater access to EV charging infrastructure will reduce range anxiety, expand transit hub accessibility, address last-mile commuting challenges, and encourage more residents to transition away from vehicles powered by fossil fuels.

- Install EV charging stations across the region such as residential neighborhoods, commercial centers, and industrial zones.
- Provide incentives for property owners and businesses to install EV charging stations.
- Collaborate with utility companies to ensure adequate electrical capacity and grid support for increased EV charging demand.
- Develop public-private partnerships to fund and maintain EV charging infrastructure.

## Metrics

Performance metrics may include:

- Miles of bike lanes and pedestrian paths added

- Adoption of smart transportation and transit technologies
- Public transit ridership across different demographics
- Traffic congestion and commute times
- Subsidy and voucher utilization
- Number of cars distributed through car ownership programs
- Number of individuals using ride-share and carpool programs
- Cost savings for commuting program participants
- Amount of public transit funding secured
- Reach and frequency of public transit services
- Public transit accessibility ratings
- Number of EV charging stations installed and usage statistics
- Percentage of EV chargers located in under-resourced communities
- GHG emissions reductions

### **Potential funding sources**

Federal and state appropriations and grants, private-sector and philanthropic support

### **Policy adjustments needed**

- Increased funding for transportation subsidies and vouchers, ride-share and carpool programs
- Policies to support increased transit accessibility and equity-focused transportation initiatives
- Provide incentives for EV infrastructure investments
- Municipal and county zoning amendments to enable increased density in order to create or build out regional job centers that are proximate to transit.

## Strategy: Access to childcare

*Improve the availability of affordable childcare so that workers, especially women and single parents, are able to prepare for quality jobs, contribute to the regional economy, and advance in their careers without undue financial strain.*

### Rationale and other considerations

The lack of affordable and reliable childcare continues to be a major challenge for families throughout Inland SoCal. As of 2021, spaces were only available for 14.7 percent of children requiring childcare in Riverside County and 13.5 percent of children requiring childcare in San Bernardino County. In comparison, spaces were available for 24.7 percent of children requiring childcare statewide.

These findings were echoed by community engagement. The Coachella SRT reported that childcare resources are not stable, and the only currently available childcare is at the military base, which not everyone has access to. The High Desert SRT discussed how important it is not only to make childcare more available but also to provide affordable and reliable childcare services equitably across different communities.

Reliable childcare enables more parents, especially women, to join the workforce, expanding the Inland SoCal labor pool and enhancing the region's overall economic competitiveness. Analysis by the Bipartisan Policy Center estimated that the economic impact of closing the childcare gap in the Inland SoCal region could reach between \$2.8 billion and \$4.2 billion annually.

Childcare access boosts economic mobility by making it possible for caregivers to pursue the education and training they need to secure a quality job. By addressing the caregiving responsibilities that many Inland SoCal residents (particularly women and single parents) face, access to affordable childcare can help workers be more productive at work and support would-be entrepreneurs with caregiving responsibilities.

#### *Equity impact potential*

Expanding affordable and reliable childcare options will have an especially significant impact on lower-income families, who face serious cost burdens from childcare expenses. By removing the sizable barrier posed by the current lack of access to childcare, this strategy can improve outcomes, increase financial self-sufficiency, and open up career development opportunities for lower-income residents throughout the region.

#### *Alignment with state strategies*

Access to childcare aligns with the following two strategies: California's workforce development goals, and Early Childhood Education Initiatives.

### Tactics

#### **Harness entrepreneurship to expand capacity for reliable and affordable childcare**

**options:** Assist entrepreneurs interested in starting childcare businesses to meet local demand, with specific supports for women founders of color and others from historically

underrepresented groups. Helping these businesses launch and grow will increase the availability and affordability of quality childcare options throughout the region.

- Launch targeted entrepreneurial support programs providing childcare-specific cohort-based business education and stipends/grants for starting up and sustaining home-based enterprises (models include Stanislaus 2030's In-Home Childcare Expansion Project and programs undertaken by Women's Economic Ventures and El Pajaro CDC on the Central Coast)
- Expand the number of childcare slots available at the UCR Center for Early Childhood Education and ensure it meets the needs of parents and children, including those with special needs.

**Promote greater business leadership in offering on-site childcare facilities and/or subsidies for employees:** Reliable and affordable childcare options for workers help increase workforce participation, employee satisfaction, and business productivity.

- Organize employer collaboratives in specific sub-regions or industries to pool resources to offer subsidized or free childcare.
- Provide tax incentives or grants to businesses that establish on-site childcare facilities.
- Develop subsidy programs for businesses to offer childcare support to employees.
- Implement a public awareness campaign highlighting the benefits of employer-sponsored childcare.

**Advocate for policy changes that would increase funding for childcare subsidies for parents and infrastructure for training childcare professionals:** Secure increased funding for childcare subsidies and infrastructure to improve access to affordable, high-quality childcare. This tactic addresses the critical need for comprehensive training programs for childcare professionals and integrates funding streams from various sources, including schools and HR departments.

- Advocate for increased state and federal funding for childcare subsidies and infrastructure improvements.
- Develop partnerships with schools and HR departments to combine existing funding streams and training resources.
- Secure grants and other financial resources to expand childcare facilities and programs.
- Implement comprehensive training programs for childcare professionals to enhance the quality of care.

**Expand government-supported childcare assistance programs for low- and middle-income families:** State and federal childcare assistance programs can increase the accessibility and affordability of quality childcare and ensure that more Inland SoCal children receive high-quality early education.

- Increase government funding for childcare assistance programs to cover a broader range of income levels, including lower middle-class families who struggle with the cost of childcare.

- Streamline the childcare assistance application process.
- Develop partnerships with local childcare providers to ensure high-quality care.
- Implement regular monitoring and evaluation of funded programs to ensure they are meeting the needs of low- and middle-income families effectively.

**Invest in training and certifying more childcare professionals to meet demand:** Address the shortage of qualified childcare professionals in the region by investing in comprehensive training and certification programs. By enhancing the skills and qualifications of childcare workers, this tactic will improve the quality of childcare services and meet the growing demand in this region.

- Develop and fund training programs for childcare professionals, combining existing funding streams with those available from schools and HR departments in the region.
- Implement pedagogic counseling to enhance professional development among childcare workers.
- Expand certification programs to ensure childcare providers meet high standards of care and education and provide support for increased certification.
- Increase support for professional development of childcare staff to increase accreditation among existing childcare providers
- Provide financial incentives and support to encourage participation in training and certification programs.
- Expand specialized training for childcare providers in caring for children with special needs, addressing the current limitations in available services and ensuring that families with special needs children have access to quality care. This will not only enhance the pool of qualified professionals but also make special needs childcare more accessible and affordable for families facing economic challenges.

**Partner with community organizations to provide childcare vouchers or scholarships:** Increase access to affordable childcare for low-income families in the region by partnering with community organizations to provide childcare vouchers or scholarships. This tactic will help alleviate the financial burden of childcare and ensure that more children have access to high-quality early education.

- Partner with community organizations such as First Five, CSUSB, and Child Resource Center to manage and distribute childcare vouchers and scholarships.
- Incentivize nonprofits to collaborate with employers to offer low-cost childcare on-site or nearby, and explore opportunities to provide low-cost or free childcare at libraries and apartment complexes.
- Address the experiences and challenges of childcare providers within the voucher system, including payment levels, administrative procedures, and support systems.
- Address the “too rich to qualify, too poor to afford” dilemma facing countless families in the region by implementing a sliding scale or adjusting thresholds based on the local cost of living so that families in high-cost areas are not unfairly excluded

**Incentivize employers to provide flexible work arrangements and remote work options that accommodate parental responsibilities:** Promoting flexible work arrangements and remote work options will help parents in the region balance their responsibilities at work and at home. This tactic will increase workforce participation, improve employee satisfaction, and reduce the stress associated with managing childcare and work commitments.

- Provide tax incentives or grants to employers who implement flexible work arrangements and remote work policies.
- Develop guidelines and resources for employers to create and manage flexible work programs.
- Offer training and support to help businesses transition to flexible and remote work models.

**Support initiatives that improve the quality and accessibility of early childhood education:** Providing financial assistance, wraparound services, and improved early education programs will ensure that children from low-income families receive high-quality early education that supports their development and prepares them for future academic success. Policy action on childcare worker training, pay, and retention will begin to address the critical issue of underpayment of childcare workers, which directly influences the quality of care provided.

- Provide financial assistance for low-income families so that they can afford quality early childhood education.
- Increase funding and availability of Head Start and other high-quality early education programs.
- Partner with community organizations to deliver comprehensive early childhood education services.
- Implement policies that support fair wages, professional development, and retention of early childhood educators to attract and retain a skilled workforce, which is essential for maintaining and improving the quality of childcare centers

**Continue to raise awareness about the importance of affordable childcare for economic mobility and regional development:** Increase public and policymaker awareness of the critical role that affordable childcare plays in supporting economic mobility and regional development in the Inland Empire. By highlighting parents' needs and the economic benefits of investing in childcare, this tactic will build support for policies and initiatives that improve childcare affordability and accessibility.

- Conduct public awareness campaigns to educate the community and policymakers about the importance of affordable childcare.
- Engage nonprofits in child advocacy to amplify the voices of parents and childcare providers.
- Collect and share data on parents' needs and the economic impact of affordable childcare.
- Partner with local businesses, community organizations, and educational institutions to promote the benefits of investing in childcare.
- Share real-life stories of local residents who were able to develop their and their children's long-term key skills and knowledge because they had accessible childcare.

## Metrics

Performance metrics may include:

- Number of new childcare slots created
- Number of low-income families receiving childcare subsidies, vouchers, scholarships, and/or wraparound support services
- Childcare facility quality and parent/caregiver satisfaction ratings
- Number of childcare businesses that are accredited
- Demographic diversity of those starting and maintaining childcare businesses
- Workforce participation rates for working-age women and parents/caregivers
- Number of childcare professionals and early childhood educators trained, certified, and employed in the region
- Number of businesses offering flexible work arrangements and/or remote work options
- Number of policymakers and community leaders supporting childcare initiatives

## Potential funding sources

Federal and state appropriations and grant programs, philanthropic support

## Policy adjustments needed

- Standardize training and certification requirements and support the retention of childcare workers and early childhood educators.
- Adjust tax codes to provide incentives for businesses offering childcare, flexible work arrangements, and/or remote work opportunities.
- Streamline and simplify application and eligibility determination processes for low-income families seeking childcare subsidies and other supports.
- Ensure that policies support equitable pay for childcare workers (many of whom are people of color) as well as ongoing professional development and continuous quality improvement in childcare and early education.
- Standardize and simplify administrative and payment processes for providers.



## Strategy: Building social and cultural capital

*Enhance cultural and social capital by implementing initiatives and programs focused on financial literacy, networking, and exposure to different career paths in order to lower barriers to economic opportunity, career advancement, and wealth building for residents from historically marginalized communities.*

### Rationale and other considerations

Cultural and social capital—which includes social connections, exposure to different career paths, access to training and education, familiarity with workplace norms, and more—play a major role in determining a person’s economic situation. Helping people from historically marginalized communities boost their cultural and social capital can make it easier for them to achieve economic mobility. Effective mechanisms for building this capital include increasing workforce readiness, improving human skills such as critical thinking and communications, expanding awareness of quality job possibilities, building stronger community networks and support systems, and increasing local engagement.

#### *Equity impact potential*

Regional efforts to increase cultural and social capital within historically marginalized communities will have a direct effect on lower-income households throughout Inland SoCal. The activities detailed below will help set these residents up for success by connecting them with mentors; helping them navigate professional environments and build a professional network; and raising awareness of quality job possibilities and training opportunities, and wraparound supports.

#### *Alignment with state strategies*

This strategy supports California’s goals for equitable economic development and workforce preparedness, and complements state efforts to enhance public education and community development programs. It also aligns with initiatives to promote diversity, equity, and inclusion in economic activities.

### Tactics

**Support and expand community mentorship programs, networking events, and professional development workshops:** Connect individuals with successful industry professionals and facilitate networking events and professional development workshops, (including online platforms and resources) to help foster supportive networks and affinity groups that can provide peer mentorship and encouragement.

- Encourage and expand mentorship programs that pair individuals with industry professionals, with specific programming for incumbent workers.
- Broaden access to regular networking events and workshops on a wide range of critical topics, including communication, teamwork, and problem-solving; job search skills; financial literacy; imposter syndrome; and workplace etiquette.
- Ensure that events and workshops are broadly accessible and provide childcare so that caregivers are able to attend.

- Expand and raise awareness of online mentorship and networking opportunities.
- Support worker affinity groups that provide peer mentorship and community.
- Explore paying individuals to train and serve as mentors in order to ensure commitment and value.

**Collaborate with educational institutions to enhance career counseling services:**

Enhance career counseling services at educational institutions to offer guidance on professional development, workplace etiquette, and cultivate social connections among students from different socioeconomic backgrounds.

- Strengthen partnerships between educational institutions and career counseling services.
- Develop comprehensive career counseling programs that include guidance on professional norms, workplace etiquette, and social connections.
- Incorporate social equity training programs, such as restorative justice and anti-bias training.

**Expand grants and programming to organizations serving historically marginalized communities:**

Provide support for organizations working to build social and cultural capital in communities of color and other underrepresented communities.

- Develop programming that supports initiatives to build social and cultural capital, including financial literacy and networking opportunities.
- Support the creation of worker-owned co-ops, collectives, land trusts, and local businesses.

**Metrics**

Performance metrics may include:

- Event and workshop attendance and participant feedback
- Number of mentorship pairs established
- Participant surveys to gauge satisfaction and program impact on social and cultural capital

**Potential funding sources**

Federal and state appropriations and grant programs, private-sector and philanthropic support

## Strategy: Employer support for affordable housing

*Explore how area employers can support the expansion of affordable housing stock in the region.*

### Rationale and other considerations

Concerns about housing came up frequently in SRT discussions and conversations with community members. California faces a severe housing crisis characterized by limited housing stock and widespread affordability challenges. Restrictive zoning, high construction costs, and decades of underbuilding relative to population growth have all had a hand in creating the significant imbalance that now exists between demand and available supply.

Across Inland SoCal and throughout the state, countless low-income families and middle-class households are forced to spend an outsized fraction of their income on housing. In some places, housing prices have pushed families to move far from employment centers, leading to increased traffic, longer commutes, higher monthly household transportation expenses, and lower quality of life.

Employers in Inland SoCal have a particular interest in finding a solution to the housing crisis. An improved housing market would lower costs for workers, reduce commutes, encourage employee recruitment and retention, and support economic mobility for millions of households in the region.

Addressing a challenge of this scale will require an all-hands-on-deck approach. Collaboration among the public, private, philanthropic, civic, and nonprofit sectors will be needed if the state hopes to resolve this persistent situation.

The possibilities presented here offer a handful of interventions that employers can make to help address housing affordability. However, private-sector engagement on matters like this can be more difficult in Inland SoCal given the high proportion of small and medium-sized firms in the region. These smaller entities have fewer resources available for activities outside their primary line of business. As such, employers of all sizes will need to work together to determine how best to get involved to make progress on this pressing issue.

- Establish employer-sponsored housing assistance programs and workforce housing options near key employment centers and transit hubs, with mechanisms to encourage contributions from small- and medium-sized businesses in proportion to their means.
- Advocate for zoning policies that prioritize workforce housing (with emphasis on high-density construction to maximize impact on the housing market).
- Establish public-private partnerships to develop workforce housing near employment centers and transit hubs

## Vitality and quality of life priorities

Access to quality jobs that enable residents to sustain themselves and their families is only one (albeit extremely important) dimension of what constitutes a thriving region. Residents' ability to meet their basic needs, find adequate housing in a safe neighborhood, and be part of a vibrant community are also crucial inputs to prosperity (see Figure 1). The interconnected nature of these inputs means that improving these conditions also enables residents of all ages to attain higher levels of education, get better jobs, and contribute to regional economic growth. Cross-cutting investments in each of these areas are thus critical to spark a "flywheel" effect and accelerate the emergence of a more inclusive Inland SoCal.

**Figure 1: Seven Vital Conditions for Health and Well-Being Framework**



Source: Community Commons.

Reflecting the State of California's California Jobs First guidelines, this report focuses on increasing the number of quality jobs in the region and getting more residents on pathways into those jobs. However, complementary action and investments in other enablers of prosperity are equally critical for truly inclusive outcomes. Priorities raised by the region's SRTs include:

### *Housing*

Significant housing supply shortages in the State of California in general and in many Inland SoCal jurisdictions in particular highlight the need for policy action to increase construction of new homes (e.g., by streamlining permitting procedures and promoting higher-density zoning), add accessory-dwelling units to existing residences, and explore

the feasibility of using land bank trusts to acquire and preserve residential units for community residents. Where housing supply is sufficient, down payment assistance and housing voucher programs can improve access to private rental markets (particularly in higher or mixed-income “opportunity areas”), which has been shown to boost economic mobility for lower-income households. Investments in permanent supportive housing, wraparound services, and displacement prevention programs (e.g., legal assistance for tenants facing eviction proceedings) have also been shown to aid those at risk of or experiencing homelessness.

### *Community services and amenities*

Safe, well-maintained communities with access to basic services (e.g., grocery stores, pharmacies) and assets (e.g., libraries, parks) are critical for high quality of life. Furthermore, studies suggest a potential – though not conclusive – connection between broader economic mobility outcomes and commercial corridor revitalization strategies that combine improved local retail options, public art and placemaking, and strong pedestrian infrastructure. Other promising strategies include reclaiming abandoned lots for productive uses (e.g., community gardens, playspaces) and community-led violence prevention programs that leverage mentoring and other structured supports to build community members’ social capital and improve safety for all.

### *Health and mental wellness*

Equitable access to affordable, culturally appropriate healthcare (including mental wellness services, which are often not covered by insurance and face a scarcity of providers) is fundamental for a thriving region. Promising interventions include mobile health centers, telehealth expansion, and vouchers and subsidies for related health costs. Access to healthy food is another foundational component of wellness that can be expanded in a number of ways, including incentives and subsidies for purchasing fresh food, community and school garden programs, and expanding awareness of the federal Supplemental Nutrition Assistance Program (SNAP). SRTs also emphasized the importance of working with promotoras de salud and other trusted messengers to connect different communities to these services.

### *Other considerations and overarching factors affecting vitality and quality of life*

The success of these vitality and quality of life strategies depends on strong social infrastructure, an intentional focus on equity, and thoughtful investment in the region’s nonprofit sector, with special attention to capacity building within local community-based organizations, nonprofits, and social enterprises. SRTs also emphasized the importance of training residents on the basics of social equity and restorative justice to help them acknowledge past traumas and begin the difficult process of rebuilding trust within and across different communities.

# Conclusion

With its four-part focus on quality job creation, quality job access, economic mobility and wealth-building, and vitality and quality of life, this report charts a course for a regional economy that works for everyone. The strategies outlined here make the most of Inland SoCal's economic strengths by investing in high-potential sectors that are known to create quality jobs and addressing longstanding barriers that prevent people from finding quality jobs, opening businesses, and engaging in other wealth-building activities.

Whether these strategies deliver on their promise hinges on the region's ability to overcome longstanding obstacles to collaboration. Historically, Inland SoCal has struggled with a lack of unified vision, zero-sum competition among jurisdictions, and difficulty implementing strategic plans. CJF has helped the region begin to address these issues by requiring deep collaboration, broad stakeholder engagement, and strategic planning focused on inclusive ends. These efforts will need to continue during implementation. Rebuilding trust and establishing a culture of cooperation across the region's many different stakeholder groups will be an ongoing process. The work of Thrive Inland SoCal marks an important first step but a long path lies ahead.

## Shortcomings of the Thrive Inland SoCal CJF process

The CJF process has not been without its challenges. The list below sets out a few of the major issues that Thrive Inland SoCal confronted over the course of this initiative in the hopes that these insights can help inform future state efforts and highlight areas for continued work.

- The compressed 18-month timeline for the CJF process proved a major challenge for the region. The extent of the research, community engagement, governance building, and strategy development activities each could easily take nine months to one year to complete effectively.
- The CJF emphasis on community engagement structured using state-provided stakeholder categories resulted in an underindexing on outreach to businesses in the region. Additional industry input will be needed to prioritize regional opportunities and challenges, design interventions, and secure commitments for action.
- The more rural Inland SoCal subregions had a more difficult time navigating this process due to time constraints and a much smaller population of potential participants. It is possible that insights and opportunities specific to those subregions went unheard as a result.

Structures put in place over the course of CJF have helped position the region for this next stage of this work. As the regional collaborative moves into implementation, it will need to assign specific responsibilities to stakeholders with the capabilities and capacity to carry out the proposed strategies. Because the region's economic development needs exceed the funding available through CJF, Thrive Inland SoCal will also play a role in identifying and securing funding from a wide range of public, private, philanthropic, and civic sources. By weaving together the necessary funding and coordinating activities across Riverside and San Bernardino Counties, Thrive Inland SoCal will help the region move toward a more inclusive and resilient regional economy.

# Appendices

- A. SWOT summary**
- B. Methodology**
- C. Community engagement**
- D. CSE environmental research**

## Appendix A. SWOT summary

<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>• Solid economic growth in recent years</li> <li>• Major position in the global supply chain</li> <li>• Research and innovation strengths</li> <li>• Advanced manufacturing capabilities</li> <li>• Emergence of high-road apprenticeships and training programs</li> <li>• Emphasis on increasing the number and proportion of quality jobs</li> <li>• Clean energy production potential</li> <li>• Pollution and GHG emissions reduction efforts</li> <li>• EV adoption and charging infrastructure expansion</li> <li>• Attention to social determinants of health and healthcare access</li> </ul>	<p><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>• Uneven economic growth and insufficient quality job creation</li> <li>• Lack of economic diversification and over-reliance on logistics</li> <li>• Conventional thinking stymies creative problem solving</li> <li>• Too few quality jobs, particularly for those who did not pursue formal postsecondary education</li> <li>• Loss of agricultural land due to urban and industrial development</li> <li>• Water management and drought, heat events, flooding and landslides, wildfires, and other climate-related concerns</li> <li>• Poor air quality</li> <li>• Low median household incomes and higher proportions of residents living in poverty compared to the state of California as a whole</li> <li>• Significant disparities in educational attainment, healthcare access, food security, and chronic illnesses</li> </ul>
<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>• Increased industry diversification</li> <li>• Cluster development in industries with high potential for growth and quality job creation</li> <li>• Expanded access to quality jobs via clear, well-supported career pathways</li> <li>• Commercialization of innovations developed at area research institutions</li> <li>• Quality jobs related to the energy transition</li> <li>• Lithium Valley development</li> <li>• Clean economy innovation and adoption</li> <li>• Health impact mitigation via climate adaptation</li> <li>• Partnerships and collaborations to improve healthcare access for historically underserved groups</li> </ul>	<p><b>Threats</b></p> <ul style="list-style-type: none"> <li>• Challenges arising from global supply chain shifts, environmental impact concerns, automation, and other structural elements of the economy</li> <li>• Continued over-reliance on the logistics industry</li> <li>• Insufficient quality job creation</li> <li>• Underutilized research and innovation assets</li> <li>• Delays in the energy transition</li> <li>• Persistent disparities in household income, educational attainment, access to quality jobs</li> <li>• Intensifying climate impacts</li> <li>• Intractable health disparities and insufficient healthcare access</li> </ul>



## Appendix B. Methodology

This report draws on quantitative analytics, qualitative research, and extensive community engagement conducted between Fall 2023 and July 2024. Research focused on the core elements of the CJF process: economy and economic development, labor market, industry clusters, environment and climate, and public health. Given the interconnected nature of the regional economy, some of these analyses overlapped in focus. Most quantitative analyses were conducted at the county level, with additional local insights gathered through qualitative outreach.

### Baseline economic assessment

Initial quantitative analytics involved a baseline assessment of the economy and economic development in the region. This analysis looked at overall regional performance, the strength of traded and local-serving sectors in the region, and regional costs of living. A broad range of methods were employed, including shift-share decomposition analysis, which provides insight into the national, state, and regional factors that influence economic growth in Inland SoCal. This type of analysis in turn informed identification of regional strengths.

Data from a number of proprietary databases including Dun & Bradstreet, Cambia's The Lens, Clarivate's Web of Science, the Kauffman Foundation's Entrepreneurship Indicators, and Pitchbook were analyzed to better understand regional industry dynamics, key drivers of regional economic competitiveness, and barriers to opportunity.

This study also investigated regional costs of living across a broad range of family compositions and identified the proportions and demographic trends of Inland SoCal residents who struggle to make ends meet. This inquiry involved customization of the University of Washington's Self-Sufficiency Standard to include modest taxable emergency savings as well as non-taxable retirement savings. Addition of these funds to the market baskets of monthly household costs reflects a desire to move workers toward greater economic mobility (not just self-sufficiency).

### Opportunity Industries labor market analysis

The Brookings Institution's Opportunity Industries methodology provided the framework for this report's labor market analysis. This methodology uses data from public and proprietary sources including Lightcast, the U.S. Census Bureau, and the University of Washington's Self-Sufficiency Standard to determine the concentrations of quality and promising jobs in the regional economy.

With this assessment in hand, additional analysis was performed to delve into specific talent needs and better inform strategy development to improve access to quality jobs. These analytics involved:

- *Talent adjacency analysis* using O\*NET data to assess similarities among regional industries based on the kinds of knowledge, skills, and abilities needed for jobs in each industry. Strong similarity or "adjacency" of talent requirements

between two industries points to the ease or difficulty with which a worker in one industry could meet the demands of a job in the other industry. These findings are particularly helpful for assessing potential industry priorities since it sheds light on whether incumbent workers in one part of the economy could be well-suited to roles in an emerging high-potential sector. Adjacencies between industries can also suggest opportunities for shared workforce development strategies.

- Talent alignment analysis compares the pools of workers coming out of local institutions of higher education against the talent requirements of quality and promising jobs in the region. The National Center for Educational Statistics (NCES) provides data on program completions as well as lists of occupations that align with each program of study. Further custom analytics were conducted to match this information against the occupational requirements of Inland SoCal jobs in order to determine how well graduates in the region are prepared for available quality and promising jobs as well as the distribution of quality jobs among graduates within specific programs and in the aggregate. This analysis did not examine the quality of higher education programming and does not reflect the actual job outcomes of individual graduates. Instead, it estimates the extent to which quality and promising jobs are available for Inland SoCal graduates.

## **Industry clusters analysis**

This assessment involved mapping out connections between different industries in the region and identifying comparative advantages. Applying machine learning techniques to large datasets with detail on supply chains and talent demand within the region revealed which industries belong to the same value chains and which industries share similar talent needs (both of which are highly correlated with one another). The results of these analytics were then measured against a set of criteria to highlight high-value industries with a strong potential for significant quality job creation. Please see the box “How were industry growth opportunities identified and vetted?” on page 33 for additional information about this analysis.

## **Qualitative research**

The qualitative component of this project began with a thorough literature review of the region’s many existing economic development strategies, workforce development plans, climate action plans, and other relevant documents to understand current priorities and assess the level of alignment in goals and activities across different Inland SoCal jurisdictions and organizations. Insights from this research provided important context for assessment of quantitative analytics. The research team also conducted over 75 in-depth interviews with Inland SoCal residents, including workers from a broad range of industries, workforce development board directors, small business owners, entrepreneurs, community-based organizations, local government, nonprofits, and chambers of commerce. These conversations provided important insights that helped reality-test quantitative findings and informed the development of specific tactics across all strategy areas.

## Appendix C. Community engagement

### Thrive Inland SoCal vision, mission, and values

The Thrive Inland SoCal mission, vision, and values were drafted by the governance committee in open weekly meetings during April and May 2023 and then shared with the Equity Council and the full collaborative for additional feedback before being added to the collaborative's governance document. They read as follows:

#### Mission

Our mission is to build an equitable and inclusive region where all residents have a say in shaping our collective economic future and addressing historical inequities.

#### Vision

Our collaborative envisions an Inland Southern California where everyone, regardless of background or circumstance, has access to the resources and opportunities necessary to thrive. We are committed to closing equity gaps and dismantling systemic barriers that prevent individuals and communities from realizing their full potential. Ultimately, our goal is to create an Inland Empire where every community prospers in a sustainable and innovative economy, and every individual has the opportunity to live a healthy, quality life.

#### Values

Thrive Inland SoCal achieves this mission and vision by prioritizing:

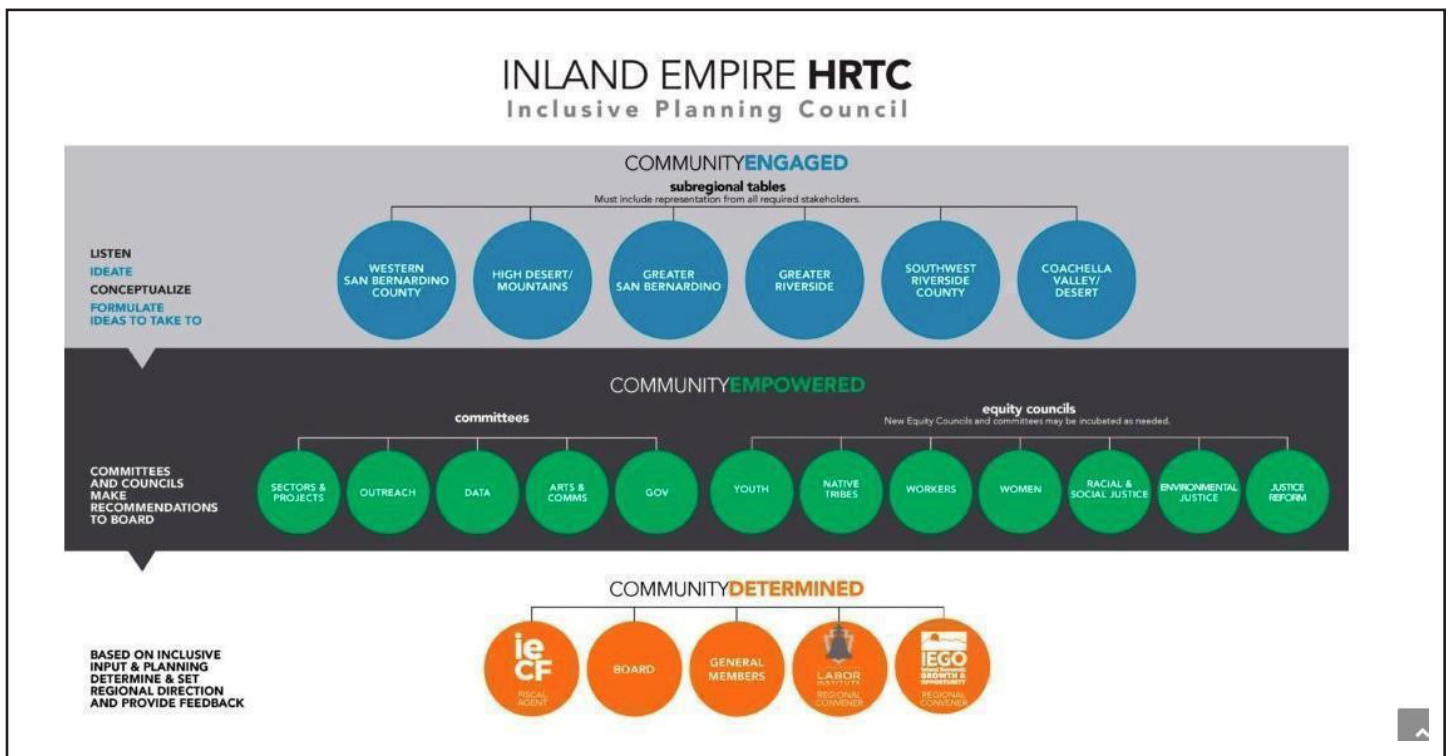
- *Cooperative culture:* We engage with each other in a spirit of mutual respect and build consensus around solutions. Everyone's voice deserves to be heard.
- *Following the High Road:* As part of this cooperative culture, we share a commitment to equitable hiring practices and business operations. All private business partners and sub-contractors must meet the minimum California Jobs First-defined standards of a high road employer, including:
  - Family-sustaining wages
  - Clearly defined routes to advancement into higher-wage jobs
  - Benefits (such as paid sick and vacation time)
  - Adequate hours and predictable schedules
  - Access to training
  - Occupational health and safety
  - Worker representation or right to organize
  - No record of wage theft, ongoing labor dispute, health/safety violations, or other violations of labor law.
- *Innovation and entrepreneurship:* Recognizing that innovation and entrepreneurship can be a powerful regional engine for equitable economic growth, we leverage assets and attributes unique to Inland Southern California. This includes both growth areas where local educational institutions play a leadership role (such as clean transportation,

cybersecurity, and agriculture), as well as small businesses serving immigrant and historically marginalized communities. We empower innovators across multiple sectors to create synergies and leverage local talent from disadvantaged communities.

- *Addressing historical and structural inequalities:* We center anti-racist approaches, power sharing, and inclusive decision making in each phase of the planning process. We define inclusion broadly to incorporate communities impacted by discrimination based on many factors, including race, sex, gender, sexuality, religion, color, physical/developmental ability, immigration status, and prior history of incarceration.
- *Data-driven decision making:* We collect, review, and evaluate relevant quantitative and qualitative data as part of our cooperative decision-making process. Guided by our commitment to equity, we seek out and incorporate equity-focused data analysis methods and tools.
- *Accountability:* We are transparent in our communications and responsible to each other for the outcomes of our decision.

## Organizational structure

The structure for Thrive Inland SoCal laid out in the final approved proposal to the state derived from the merger of two competing applications. One, led by IEGO and the Inland Empire Community Foundation, emphasized a task-based committee structure. The other, led by the Inland Empire Labor Institute, emphasized equity and subregional committees as well as sector-based committees. The merged application combined these approaches, with seven topic- or affiliation-based equity councils, six Subregional Tables, and five task-based committees. Chairs and leads from each of these bodies and a limited number of at-large members together comprise the steering committee, which is known as the Inclusive Planning Council.



The original structure was as follows:

<b>TASK-BASED COMMITTEES</b>	Governance and Budget
	Data and Accountability
	Outreach and Engagement
	Multimedia, Comms, and Culture
	Sectors and Projects
<b>EQUITY COUNCILS</b>	Youth
	Native American Tribes / Tribal Organizations
	Workers / Labor
	Women
	Racial and Social Justice
	Environmental Justice
	Justice Reform
<b>SUBREGIONAL TABLES</b>	Western San Bernardino County
	Greater San Bernardino
	High Desert and Mountains
	Greater Riverside
	Southwest Riverside County
	Coachella and Morongo

When the conveners began to build the actual collaborative, participants expressed concern about maintaining seven separate equity councils for a number of reasons, including but not limited to: 1) the fact that people would be forced to choose a single topic or affiliation when they might identify with several; 2) the time commitment for both participants and staff of maintaining seven additional weekly or biweekly meetings; and 3) that the range of perspectives on equity might be diluted through multiple, separate meetings as compared to having the opportunity to share multiple equity-related conversations in the same meeting space.

As a result, after initial meetings in April 2023, the seven equity committees were merged into a single Equity Council that continues to meet on a biweekly basis. However, to ensure that the composition of the Inclusive Planning Council was not affected negatively by this change, seven seats were still set aside for the chairs of the original seven equity committees.

The Equity Council is tasked with advocating for specific actions related to representation, equity, and inclusion. Participation on the Council is open to anyone, and in May 2023 seven members were democratically elected through a public nomination process and online ballot to serve as voting members of the Inclusive Planning Council. The voting members represent

organizations serving disinvested communities such as the [Warehouse Workers Resource Center](#), [Alianza Coachella Valley](#), and [Just San Bernardino](#), among others.

Their responsibilities include providing review and feedback on:

- Outreach and engagement
- Data development and collection
- Planning document content
- Project assessment, development, and qualification
- Consultant approval

In addition, the conveners found continuing confusion among collaborative participants over the distinction between the scope of work for the Outreach and Engagement Committee and the Multimedia, Comms, & Culture committee. In order to clarify the work and goals of each committee, their names were changed to the Business and Community Leaders Outreach Committee and the Community Engagement, Arts, & Culture committee in January 2024. The Business and Community Leaders Outreach committee focuses on bringing participants into Thrive who are leaders in local industry and also of local community-based organizations (CBOs). The Community Engagement, Arts & Culture (CEAC) committee has been particularly tasked with outreach to youth and disinvested communities.

These changes have produced the current structure of Thrive Inland SoCal:



The collaborative as a whole, with input from the Equity Council, has emphasized accessibility and inclusion. Simultaneous Spanish/English translation is available at all committee meetings, the Equity Council meetings, and biweekly general Thrive meetings. The website is also

available in both languages and we have translated core documents such as our bylaws into Spanish and made them available through the website. An Equity Council subcommittee also developed a set of Community Guidelines to ensure that our interactions are guided by considerations of equity and access.

## **Phases of outreach and engagement**

Community outreach and engagement as part of the Thrive Inland SoCal collaborative was separated into three phases to ensure community members and key affinity groups were engaged throughout each step of developing the regional strategies and the regional economic development plan.

### **Phase 1: Defining a Quality Job, October 2023 - February 2024**

*Objective:* Community members were tasked with defining what constitutes a quality job in their communities.

*Outcome:* People transitioned from using the term “good job” to using the term “quality job.” The definition of a quality job included, but was not limited to, family-sustaining and mortgage-sustaining wages, benefits, and access to career growth opportunities to live, work, and play in the region with financial stability. This definition helped establish foundational values that were incorporated in Phase 2 of the work.

### **Phase 2: Identifying Barriers to Quality Jobs and Solutions, March - April 2024**

*Objective:* Community members were tasked with identifying barriers to quality jobs, wealth building, and entrepreneurial opportunities in the region. Additionally, community members identified existing solutions within the region that assist residents in accessing and maintaining quality jobs.

*Outcomes:* This identification exercise focused the proposed strategies to further reduce the impact of these barriers and highlighted already existing organizations and initiatives providing solutions to these barriers in the region.

### **Phase 3: Reviewing Regional Strategies, May 2024**

*Objective:* Community members provided feedback on the proposed strategies to support priority tradable industry clusters and wealth-building and economic mobility as well as to address community-identified concerns and needs.

*Outcome:* The feedback collected by the subregional tables was incorporated into the proposed strategies as the regional economic development plan was drafted and finalized.

The community outreach and engagement process was integral to developing an inclusive and comprehensive regional economic development plan. The insights gained from community members across Inland Southern California during each phase helped shape the strategies that are intended to be responsive to the needs and desires of the community. Engaging with the community in each phase increased and improved understanding and collaborative problem solving, fostering an increased sentiment of co-ownership and commitment across the entire region.

## Outreach and engagement committees

Since the inception of Thrive Inland SoCal in April and May 2023, the Business and Community Leaders Outreach Committee (BCLO, formerly Outreach and Engagement) and Community Engagement, Arts and Culture Committee (CEAC, formerly Multimedia, Comms, & Culture) have hosted biweekly virtual meetings that were open to the general public. Key tasks for both committees have included assisting Thrive Inland SoCal (Thrive) with outreach to priority populations for the gathering of qualitative data on strategies to increase high-road jobs in Inland SoCal. In May 2023, both committees conducted a democratic selection process to choose their committee chairs. The nomination and voting process was open to the entire Thrive collaborative.

The BCLO Committee selected Pamela Deans, a local entrepreneur, as chair. Pamela Deans stepped down from the position in late April 2024, near the end of her one-year term, due to the need to commit more time to her business. An application to fill the vacancy was opened to the region, leading to Monica Robles, another local entrepreneur who had long served as unofficial committee co-chair, becoming our current BCLO committee chair.

The BCLO team has organized several engagements, including the Small Business Roundtable event. The Thrive Small Business Roundtable featured entrepreneurs from the region offering their perspectives on barriers and opportunities for owners while providing space for networking and connecting to regional assets. BCLO members wanted to leverage this opportunity to amplify voices not often heard in economic development spaces including street vendors, women, and people with disabilities, and to highlight opportunities for communities of color in emerging industries. Previous engagements for BCLO have included a convening in December 2023 at Chaffey College Chino Community Center. Our target audience were business and industry community members. The panel portion of the event included representatives from small business, government, industry, labor, and chambers of commerce, among others. We had nearly 100 participants that attended. The event was in partnership with Chino Valley Chamber of Commerce and Chaffey Community College District. Our panelists represented various sectors in our region, such as the San Bernardino County Superintendent of Schools, Chino Airport Business Development Manager, Small Business Majority, Chair of the National Association of State Workforce Board Chairs, IE Black Worker Center, Assistant City Manager of the City of Chino, among others. The qualitative data gathered on industry sectors through these events has helped us develop targets for the Regional Economic Plan (REP).

Additionally, in August of 2023, the BCLO committee held an Appreciative Inquiry session in partnership with the Mexican Consulate of San Bernardino. This event was filled with over 40 community members, community-based organizations, small business owners, and youth. Simultaneous Spanish/English translation was available, lunch was served, and gift cards were made available as participant compensation. Attendees reimaged their communities and the data gathered helped formulate our ongoing engagement strategies and informed the Phase 1 Planning Report submitted to the state on December 31, 2023.

Despite changes in leadership, the Community Engagement, Arts and Culture Committee has also been able to effectively implement initiatives for the project that offer lively opportunities for Inland SoCal residents to connect with Thrive. CEAC was originally led by Tim Dupree, a local creative entrepreneur, who was elected through the same process as Pamela Deans in May 2023. Tim Dupree stepped down from his post in March 2024 in order to take on video marketing and social media work with the collaborative. Two events took place during Tim's tenure that reflect the creative arts economy that is prospering in the region. The first event was held in December 2023 in Downtown Riverside and drew a large crowd through co-scheduling with the city's annual Festival of Lights and its monthly Artswalk event. The committee collected



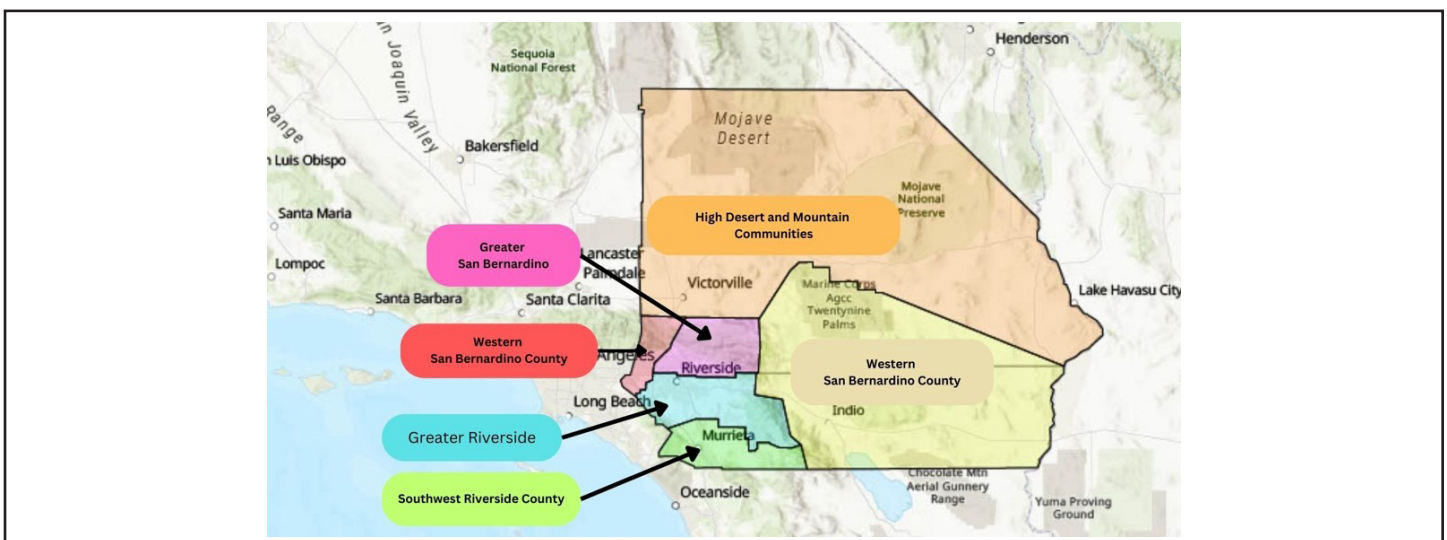
survey responses from over one hundred local residents. All materials, including the survey, were available in both English and Spanish and Spanish-speaking volunteers were on site. The second event was held in February 2024 in the City of Ontario in conjunction with the Western San Bernardino County subregional table during a monthly Artswalk event. Community members were able to stop by to learn about Thrive and fill out the community insights survey. We found that meeting community members where they are has been an effective method to increase engagement and participation.

Upon Tim’s departure, an open application was made available to Inland SoCal residents to fill the vacancy. Noraly Sainz was selected as chair. Noraly has been leading the committee through their next venture, a Thrive Arts Contest. The Thrive Arts Contest was launched in Spring 2024 to engage artists across the two-county region in an effort to share their vision of what it means to thrive in their communities. Partners for this initiative have included the Arts Area, Palm Springs Tourism Center, Riverside Arts Community Association, Arts Connection, KVCR and the Boys and Girls Club of Inland Empire. Live, in-person announcements of the winners served as additional engagement opportunities with exhibitions of art submissions at multiple locations throughout the region. Prior to serving as chair, Noraly had worked with the committee to expand Thrive outreach in our local high schools—for example, convener staff member Esmeralda Vazquez visited San Geronimo High School in November 2023 to discuss California Jobs First and collected nearly 100 surveys from the students. Several of the students then volunteered at the CEAC’s December 2023 event in Downtown Riverside, where they extended their participation in the Thrive regional collaborative. Additional youth engagement included sponsoring and gathering feedback at the Youth Career and Trades hosted by Uplift San Bernardino in July 2024, a nonprofit consortium in the region. Approximately 300 high school San Bernardino students were invited to hear panels related to local career pathways while connecting with various community-based partners through a resource fair.

## Subregional Tables

### Geography and Subregional Table designation

The Inland SoCal Region was divided into six subregional tables through a comprehensive process that considered various factors. This subdivision of the region aimed to promote governance and geographic equity across Inland Southern California. The subregional divisions were determined based on economic, transit, management, and environmental factors to ensure a balanced and fair approach.



## Subregional Table Backbone Organization Selection and Chair Selection

Greater San Bernardino	Fontana, Rialto, Colton, San Bernardino, Redlands, Highland, Loma Linda, and Yucaipa  <b>Backbone:</b> San Bernardino County Superintendent of Schools <b>Chair:</b> Susan Gomez, Inland Empire Community Collaborative
High Desert	Adelanto, Victorville, Hesperia, Barstow, Apple Valley and Needles  <b>Backbone:</b> Inland Coalition for Immigrant Justice <b>Chair:</b> Maria Okpara, Apple Valley Unified School District
Western San Bernardino	Chino Hills, Chino, Ontario, Upland, Montclair, and Rancho Cucamonga  <b>Backbone:</b> Reach-Out <b>Chair:</b> Karen May, SEIU 1000
Greater Riverside	Eastvale, Jurupa Valley, Norco, Corona, Riverside, Perris, Moreno Valley, Beaumont, Banning, San Jacinto, and Hemet  <b>Backbone:</b> Amplify Communities <b>Chair:</b> Aicherria Bell, entrepreneur
Coachella Valley/ Morongo Basin	Yucca Valley, 29 Palms, Desert Hot Springs, Cathedral City, Rancho Mirage, Palm Desert, Indio, Indian Wells, La Quinta, Blyth, and Coachella  <b>Backbone:</b> Formerly IBEW Local 440, vacant since July 2024 <b>Chair:</b> Bryan Barrera, entrepreneur, vacant since July 2024
Southwest Riverside County	Lake Elsinore, Canyon Lake, Menifee, Wildomar, Murrieta, and Temecula  <b>Backbone:</b> Economic Development Coalition <b>Chair:</b> Gabrielle McClanahan, youth representative

During the summer of 2023, an application process was finalized through an iterative process incorporating several components of our Thrive structure, including the governance committee and the Equity Council. An online application form was created so that organizations in the various subregions could apply to be a backbone organization. All applications were then read and scored by a selection committee consisting of volunteers from the governance committee. To ensure transparency, inclusivity, fairness, and equity, members of the selection committee could not review applications if a conflict of interest existed. After being reviewed, the top two applicants for each subregion were interviewed by the conveners and selection committee members via Zoom. Once those interviews were completed, the selection committee voted and then all applicants were notified of determinations.

Once subregional backbone organizations were selected and onboarded in September 2023, they began working on their first contract deliverable – selecting a subregional table chair. To ensure that all subregions were given autonomy and space to create their unique respective tables, they were only provided with a few guidelines for their selection process: 1. The chair selection must be a democratic process. 2. The selection process must be open and accessible to the community. 3. The process must follow overarching Thrive guidelines as outlined in the governance document. Subregional table chairs were selected between September 2023 and January 2024. To ensure fairness and accuracy, members of the convener team assisted with counting the votes. Following the chair selection process, all chairs received an onboarding

session to launch into their work. These chairs represent key local organizations such as labor unions, CBOs, and educational entities.

### **Subregional Table initial affinity group outreach process**

Once selected, every subregional table (SRT) backbone organization and subregional table (SRT) chair were tasked with building their SRT. Multiple mediums of outreach and communication were launched simultaneously, in order to bring people to their respective SRT. Each of the SRT meetings occur at a mix of days and times to accommodate different working schedules, and typically have a Zoom or hybrid component. Simultaneous Spanish/English translation is typically offered and food is often provided. Participant compensation is available via gift cards.

The SRTs also are tasked with making an effort to successfully outreach to our state-designated affinity groups and all community members in their subregion. These tables are open, inclusive, and accessible to everyone. Each organization began by reaching out to their existing networks to invite people to the first meeting. They also used social media and information outlets (i.e. newsletters) to reach people. During each meeting, the SRT leads have a call to action: invite a friend. This has helped grow the engagement and participation throughout the six SRTs. Our SRT leads also use community events as an opportunity to invite community members to their next gathering; meeting people where they are at remains an effective method. Subregional table leads also have time during our general regional Thrive meeting to provide updates and invite members to their local subregional table gatherings. Each SRT meeting date/time and location is also noted on the calendar on the Thrive Inland SoCal website.

### **Contractual obligations**

Central to the planning process were six backbone organizations, each of which received a \$100,000 grant to serve as subregion conveners. To ensure geographic equity, each table had to include participation from all 12 affinity groups or make efforts to include them. Additionally, each subregion had to hold open meetings to incorporate individuals who typically did not participate in such planning processes.

All subregional table backbone organizations must:

1. Be open and accessible to all community members.
2. Hold at least one subregional table meeting per month.
3. Attend monthly Community of Practice meeting.
4. Attend general regional Thrive meeting to provide updates.
5. Submit monthly narrative report with expenditures.

### **Meeting structure and frequency**

The SRTs and the two outreach committees held a total of 95 events between October 2023 - August 2024 throughout Riverside and San Bernardino counties. The table below shows meetings held during this timeframe.

	Business & Community Leaders Outreach	Coachella Valley/Morongo Basin	Community Engagement, Arts & Culture	Greater Riverside	Greater San Bernardino	High Desert	Southwest Riverside	Western San Bernardino
Aug	Appreciative Inquiry Session - 8/22/2023		Committee Meeting - 8/31/24					
Sept		Community of Practice-Subregional Backbones - 9/28/24	Committee Meeting - 9/7/24 9/14/24	Community of Practice-Subregional Backbones - 9/28/24	Community of Practice-Subregional Backbones - 9/28/24	Community of Practice-Subregional Backbones - 9/28/24	Community of Practice-Subregional Backbones - 9/28/24	Community of Practice-Subregional Backbones - 9/28/24
Oct			Committee Meeting - 10/5/24 10/12/24 10/19/24 10/26/24	SRT Meeting- 10/18/24	SRT Meeting - 10/24/2023	SRT Meeting 10/26/2023		SRT Meeting - 10/5/2023
Nov			Committee Meeting - 11/2/24	SRT Meeting- 11/2/24	SRT Meeting - 11/1/2023			SRT Meeting - 11/2/2023
Dec	Business Leaders Event - 12/13/2023	SRT Meeting 12/9/2023	Thrive Unplugged Events - 12/2/2023 and 12/9/2023				SRT Meeting - 12/27/24	SRT Meeting - 12/7/2023
Jan	Committee Meeting - 1/12/2024	SRT Meeting 1/9/2024	Committee Meeting - 1/11/2024		SRT Meeting - 1/16/2024	SRT Meeting 10/26/2023	SRT Meeting - 1/31/24	
Feb				44th Annual Black History Expo & Parade - 2/10/2024	SRT Meeting - 2/20/2024		SRT Meeting - 2/28/24	SRT Meeting - 2/1/2024  Art Walk Outreach Event - 2/17/2024
Mar	Committee Meeting - 3/22/2024	SRT Meeting - 3/29/2024	Committee Meeting - 3/7/2024 and 3/21/2024	Starting Over Inc Event - 3/7/2024  Listening Session - Reentry Conference - 3/28/2024	SRT Meeting - and Post-Secondary Student Panel: Voices on the Region's Economy 3/19/2024		SRT Meeting - 3/19/2024	SRT Meeting - 3/7/2024

	Business & Community Leaders Outreach	Coachella Valley/Morongo Basin	Community Engagement, Arts & Culture	Greater Riverside	Greater San Bernardino	High Desert	Southwest Riverside	Western San Bernardino
Apr	Committee Meeting - 4/8/2024 and 4/22/2024	SRT Meeting - 4/15/2024	Committee Meeting - 4/4/2024 and 4/18/2024	Listening Session - Staff at California Indian Manpower Consortium - 4/5/2024  SRT Meeting - 4/10/2024  Boys & Girls Club Listening Session - 4/16/2024	Barriers & Solutions Workshops 4/2/2024 and 4/3/2024  SRT Meeting - 4/25/2024	SRT Meeting - 4/2/2024	SRT Meeting - 4/16/24	SRT Meeting - 4/4/2024  SRT Meeting - 4/30/2024
May	Committee Meeting - 5/3/2024, 5/17/2024, 5/31/2024	SRT Meeting - 5/8/2024	Committee Meeting - 5/2/2024, 5/16/2024, 5/30/2024	Strategy Reviewer Meeting - 5/15/2024  SRT Meeting- 5/30/24	Strategy Reviewer Meeting - 5/13/2024  SRT Meeting and Community Insights Panel: Amplifying the Voices of Our Non-Profit Business Leaders 5/28/2024	Strategy Reviewer Meeting - 5/30/2024	Strategy Reviewer Meeting - 5/21/2024	Strategy Reviewer Meeting - 5/24/2024
Jun	Committee Meeting - 6/14/2024 and 6/28/2024  Small Business Roundtable - 6/20/2024	SRT Meeting - 6/6/2024  Strategy Reviewer Meeting - 6/26/2024	Committee Meeting - 6/13/2024 and 6/27/2024  Art Contest - Launched 6/2024	SRT Meeting - 6/20/2024	SRT Meeting 6/25/2024	SRT Meeting - 6/6/2024  Strategy Reviewer Meeting - 6/13/2024	SRT Meeting - 6/18/2024	SRT Meeting - 6/6/2024

### Activities at monthly SRT meetings and key takeaways

Meetings were held in-person, virtually, and in hybrid formats and included: open discussions, breakout rooms, individual interviews, group share-outs, a youth panel, a nonprofit panel, and presentations and talks. The topics discussed included: strategies for economic mobility and wealth building, prioritizing quality jobs, the language of equity, expanding access to childcare, transportation, and housing as well as the importance of collaboration with relevant organizations with an emphasis on barriers and solutions to improving quality of life within the region. In-meeting conversations were made accessible through online plug-ins and virtual translation as well as on-site translation services.

Across each of the 6 SRTs, community members discussed questions, such as:

- How do we reach out to the community to engage a variety of affinity groups, or targeted sub-groups historically excluded from the planning process?
- How can we incentivize quality healthcare jobs and upward mobility in our region?
- What are the biggest barriers that residents face?
- Which barriers are being or not being addressed effectively?
- Which barriers are most challenging for historically disinvested communities in your subregion?
- What efforts already exist in the region to address the barriers identified?
- Which efforts should be expanded?
- What's stopping people from getting quality jobs and living well in our area?
- What are some barriers to getting and keeping a quality job, and what barriers to advancing might come up in the next 5 years in that job?
- What are some barriers to starting and maintaining a business, and what type of support might you need in the next 5 years to grow that business?
- What kinds of cities and opportunities for play on our days off do we want to see in the region if we are to keep our trained workers in the region?

The SRTs also explored the strategies presented in this Regional Plan when they were initially drafted. The convener team asked SRTs to create reviewer groups with regular attendees that have been participating in the Thrive Inland SoCal collaborative. These reviewer groups provided targeted feedback on the tradable sectors strategies and the wealth-building and economic mobility strategies. For the tradable sectors strategies, reviewer groups explored a variety of questions, for example:

*Advanced Manufacturing:* What advanced manufacturing training programs and supports exist in the region? How effective are they? Do they meet firm needs? What else is needed?

*Business Services:* To what extent is the region advancing innovation in cybersecurity (for example, by developing new methods and technologies) as opposed to meeting customer needs for standard cybersecurity services?

*Cleantech:* What are the best ways to encourage cleantech adoption, especially for smaller businesses that may not have much background knowledge or resources?

*Sustainable supply chains:* How would rapid decarbonization of this cluster affect environmental outcomes for residents of the region's most disinvested communities?

For the wealth-building and economic mobility strategies, reviewers were asked to consider the extent to which similar past efforts were successful and how they could be improved, and, for those efforts that were successful, how scalable or broadly applicable the approaches were. Reviewers commented on the extent to which the strategies focused on expanding residents' access to quality jobs and encouraging entrepreneurship and small business success while addressing day-to-day barriers in the region.

Valuable input and feedback were collected through the SRT monthly meetings and reviewer group discussions. Some of the key topics that emerged from these activities and discussions included: barriers to accessing public transportation, affordable childcare and housing,

accessible transportation, building social capital, and jobs with career growth and training opportunities. SRTs and their attendees also discussed solutions to these barriers including resources needed in the region and expansion of already existing solutions. Brookings and UCR used this feedback to inform strategy development.

### Activities organized by SRTs in addition to monthly SRT meetings

The table below highlights additional outreach events and activities organized by the SRTs and convener team.

Date	Event Name	SRT or Committee	Event Type	Agenda	Target Audience	Location	Number of Attendees
8/22/2023	Appreciative Inquiry Session	Business and Community Leaders Committee	In-person panel and breakouts event	Asset-based approach Inquiry: - What is a quality job?	Business and Community Leaders and Spanish speakers	San Bernardino	40+
12/2/2023 12/9/2023	Thrive Unplugged	Community Engagement, Arts & Culture Committee	2 in-person arts and culture outreach events	Inquiry: - What is a quality job? - Health - Arts and culture as placekeeper	General and disinvested community and Spanish speakers	Riverside	500+
12/13/2023	Thrive Inland SoCal Workforce Event	Business and Community Leaders Committee	In-person panel and breakouts event	Inquiry: - What is a quality job? - Regional resources	Small Businesses, Workforce Dev, and Community Leaders	Chino	40+
2/17/2024	We Are All Community Developers	Western SB County	In-person arts and culture outreach event	Inquiry: - Community Insight Survey - Arts and culture as placekeeper	General and disinvested community and Spanish speakers	Ontario	75+
6/20/2024	Small Business Roundtable	Business and Community Leaders Committee	In-person panel and breakouts event	Inquiry: - Barriers and solutions for small businesses - Resource fair	Small businesses and entrepreneurs and Spanish speakers	San Bernardino	60+
6/19/2024	Thrive Juneteenth Mixer	Convener	In-person panel	Inquiry: - Barriers and solutions for African American residents	African American residents, providers, organizations	Moreno Valley	60+
7/21/2024	Thrive Art Contest	Community Engagement, Arts & Culture Committee	Online	Inquiry: What does it mean to thrive in our region?	General community and Spanish speakers	Online	40+

## Activities outside of monthly SRT meetings

Additional engagement sessions were conducted with partners representing key populations that elicited feedback on barriers and solutions to accessing quality employment in the region. Typically, a partner would recruit a group of participants that would agree to answer key questions in an informal group discussion either in-person or over Zoom. Sessions lasted approximately 30 - 40 minutes and feedback was gathered through online collaboration tools or through facilitator and participant notes. Some of the partners that co-hosted these sessions included:

- Back to the Future Youth Conference (San Bernardino high school students)
- Reentry Conference: Barriers and Solutions Workshop
- African American Family Wellness Advisory Group Presentation on Thrive/Barriers and Solutions
- Barriers and Solutions Sessions w/Greater San Bernardino SRT
- Thrive Presentation at Oak Tree Learning Center
- Barriers and Solutions session with the Child Care Resource Network
- Youth Career and Trades Fair, Uplift San Bernardino
- Thrive Juneteenth Mixer event in partnership with the African American Family Wellness Advisory Group
- Union Local SEIU 2015 focus group with members on Thrive/Barriers and Solutions (2 sessions)
- Union Local United Auto Workers focus group with members on Thrive/Barriers and Solutions
- Union Local ATU 1704 focus group with members on Thrive/Barriers and Solutions (2 sessions)
- Southwest Carpenters union focus group with members on Thrive/Barriers and Solutions

Inland SoCal is home to the largest Labor Council in the state which is the umbrella organization for approximately 93 local unions. Because unions are key to the discussion of high-quality jobs and employment, we have engaged locals to further integrate the voices of workers in the region into strategy development. With these goals in mind, we were able to conduct additional union focus groups with SEIU, UAW, ATU and the Southwest Carpenters to gather feedback.

## Outreach and engagement process

The convener team and CSE provided support to the outreach committees and the SRTs to plan and coordinate events, provide guidance, and to gather community insights. The image below provides an overview of the elements of this process. Additionally included is a retrospective summary of the successes and challenges that occurred.





### Outreach & Engagement Support

- Create Outreach & Engagement Plan Template
- Support with gathering community insights through various methods (e.g., group activity, survey, interview)
- Summarize community insights and share with SRTs and committees for transparency and feedback
- Provide guidance on any outreach gaps/opportunities
- Be a sounding board for new ideas



### Thrive Engagement Map

- Combine stakeholder lists from SRTs, committees, general Thrive meetings
- Create interactive map to show Thrive participant activity by cities, opportunity zones, organization names
- Provide downloadable lists of participating organizations
- Update periodically with new participants



### Event/Meeting Planning Facilitation

- Planning – Agenda, activities, event layout, other support
- Material creation – Presentation, survey creation, interactive sticky note boards, marketing/display materials
- Moderator/facilitator support
- Local students can be engaged to support planning and facilitation
- Event set up and breakdown
- Event debrief and notes

One of CSE's key roles within the Thrive Inland SoCal project was supporting the six subregional tables (SRTs) as well as the Community Engagement, Arts & Culture Committee and the Business and Community Leaders Outreach Committee. This critical support ensured effective communication, timely information sharing, and steady progress toward achieving the project's objectives.

#### Breakdown of CSE's Outreach and Engagement Responsibilities:

##### 1. Monthly SRT Meeting Support

- CSE collaborated with SRT leads, at the SRT leads' discretion, to define meeting agendas, identify key discussion points, plan and support in-meeting activities, and prepare any necessary materials (e.g., presentations, reports) to facilitate productive meetings.
- CSE ensured comprehensive documentation of all discussions, decisions, and action items discussed during the meetings. This included capturing key points from both in-person and virtual attendees.
- CSE met with SRT leads and discussed the previous SRT meeting. Any lessons learned were incorporated into the next SRT meeting.

##### 2. Monthly and Weekly Check-Ins

- CSE proactively reached out to each SRT weekly to confirm receipt of important project information and updates, and met at least once a month to discuss meeting support and facilitation needs. This two-way communication helped identify any gaps and address them promptly.
- CSE served as a resource for SRT members. By addressing their questions and concerns, CSE fostered an environment of open communication and knowledge sharing, which was crucial for project success.

## Next steps

Having built the Thrive Inland SoCal structure and completed the Phase 1 Planning Report in 2023, the focus in 2024 has been on using that structure to engage the region in the Phase 2 strategy development process through tailored outreach led by the committees and subregional tables and a range of mechanism to collect feedback and use it to inform the decision-making processes. As noted above, the collaborative has engaged small business, CBOs, and industry through events and outreach led by the Business and Community Leaders Outreach (BCLO) committee, and has engaged youth, grassroots and arts communities through arts events and school outreach led by the Community Engagement, Arts & Culture (CEAC) committee.

Additional engagement and outreach have been solicited in partnership with community events and through targeted “barriers and solutions” sessions with labor unions, reentry populations, and other valued community members. The subregional tables have participated in this process by sharing and facilitating use of our community insights survey, hosting informative panels and speakers, and convening a subcommittee to review multiple iterations of the core economic development and mobility strategies. Finally, our CSE partners developed both short-term (the survey) and long-term (the engagement map) tools to gather information and feedback and track engagement.

Following the close of Phase 2 in September 2024, Thrive will enter the Catalyst/Implementation phase of California Jobs First from October 2024 through September 2026. During this period, we must maintain some of the already-developed mechanisms and also develop new ones to foster engagement with inclusive economic development and gather feedback on specific projects and overall strategies.

A key ongoing engagement mechanism will be the SRTs. Although they will be moderately reconfigured to operate more efficiently and in line with current economic affinities and transportation opportunities, they will continue to lead the process of sharing information out and gathering ideas and responses back in. The backbone organizations will hold two public forums each year as well as eight meetings with subregional steering committees, new entities made up of members of affinity groups and the Inclusive Planning Council based in that region. The SRTs will do the core work of sharing information about Catalyst and Implementation funding and updates on Catalyst-funded projects, as well as continue to foster connections and partnership-building that will empower the region to successfully pursue additional funding opportunities and provide alignment across regional strategies.

In addition, the Thrive engagement map will continue to be updated and available as a data source and partnership resource, and a range of data tools and other resources will be available to regional organizations on the Thrive and IEGO websites. With CSE, the conveners have carefully archived findings and materials from throughout the engagement process that will be made available (where personal identifiable information is not involved) to regional stakeholders. The Equity Council will also continue to meet and provide feedback on our efforts going forward.

As part of these efforts, we have put in place a set of transparent and accessible decision-making processes. For example, on the Catalyst fund, all applications will be scored by committees of volunteers drawn from our collaborative who sign conflict of interest statements to ensure they are not scoring any applications they have a personal connection to. The committee volunteers were chosen through an online form available and publicized to the entire collaborative. Similarly, the members of the Inclusive Planning Council that is responsible for voting on projects and making other key decisions have either been democratically elected through a process open to the entire collaborative, or are at-large members chosen through an

application process open to the entire collaborative. Typically, by the time information or an issue is brought to the Inclusive Planning Council it has already been vetted by the governance and sometimes other (data, projects & sectors) committees as well as the equity council and sometimes one or more SRTs as well. In this way, we are able to (and will continue to) maintain broad-based engagement and feedback collection with regards to the strategy development process and opportunities to sustain and expand the work of Thrive beyond the term of California Jobs First.

## Stakeholder and affinity group participation

### Stakeholder demographics

See “Thrive Engagement Map” section below.

### CBOs receiving CJF funding and services provided

See “Overview of Subregional Tables” section above.

## Thrive Engagement Map

The Thrive Engagement Map is a community resource developed by Center for Sustainable Energy (CSE) to assist community members in identifying and locating organizations and services that can support potential partnerships, funding opportunities, and workforce development initiatives. This map aims to foster collaboration and connection within the community, enhancing access to valuable resources and support networks in the Inland Southern California region.

Key features include:

- *Interactive map:* Users can hover over the map to view additional details such as: definitions, organization lists, affinity group identifications, and accessibility tools.
- *Keys and definitions:* The map has a key to easily identify areas and markers, and definitions are available where necessary.
- *Available filters:* Users can use a variety of filters to narrow down results as well as the map view.

Community inclusion elements:

- *Ability to opt-in:* Community members who participate in the Thrive Inland SoCal collaborative have the ability to opt-in to be included on the map.
- *Continuous participation:* Any new community members who participate in the Thrive Inland SoCal collaborative will be able to opt-in to be included on the map.

Benefits of the Thrive Engagement Map

- *Enhanced visibility:* Organizations and individuals who opt-in gain increased visibility within the community making it easier to form partnerships and access resources.
- *Resource accessibility:* The map provides a centralized location for finding information on workforce development services and potential partnerships or funding opportunities.

- Community connectivity: By highlighting various community centers and organizations, the map promotes a more connected and collaborative community.

The Thrive Engagement Map is a living resource available to community members for the foreseeable future. The convener team plans to update the map on a regular basis through September 2026 to include new Thrive Inland SoCal participants and stakeholders in the region.

## Community Insights Survey

### Survey purpose and administration

The Thrive Inland SoCal Community Insights survey was created to gather community responses to key questions that SRTs and researchers wanted to ask the broader communities of Riverside and San Bernardino Counties. Its purpose was to ensure that members of the community who may have been unable to join the meetings were still able to provide input and participate in the inclusive economic development process. It was intended to serve as a feedback form; it was not designed to be a survey that would generate generalizable results.

The survey was open and available from February 13 to April 15, 2024. The survey was distributed through Thrive Inland SoCal SRTs and committees at meetings, events, and via email. The survey was also made available in Spanish. Respondents typically took the survey on a mobile phone or computer.

A total of 711 responses were collected, but it is important to note that the survey results are based on an opportunistic sample; it was not administered in a way to ensure representativeness by subregion, age, affiliation, or any other group. 289 surveys were excluded from this analysis as they were found to be duplicate (more than one response submitted by the same individual), laconic (little to no effort was taken to answer, such as listing "NA" for all questions), or fraudulent (completed by the same individual and submitted with identical or AI-generated responses).

The remaining 422 surveys were spread across the six SRTs and two committees with the majority of responses concentrated in the four metropolitan SRTs of San Bernardino and Riverside counties. The rural SRTs of High Desert and Coachella Valley & Morongo Basin had the lowest survey participation rates, making up only 18 and 12 of the 422 responses, respectively.

The survey consisted of four main sections and, given the nature of the survey response results and the intention to use survey results to inform the economic development plan, CSE analysts focused analysis of the 422 survey responses primarily on the job availability, job training, and workforce advancement/preparedness survey questions.

Survey structure	
Demographic and firmographic information	Mostly multiple-choice response options to inquire about: <ul style="list-style-type: none"> <li>• Where people lived and worked</li> <li>• How they were involved with Thrive Inland SoCal</li> <li>• Contact information</li> <li>• Age</li> <li>• Which of 13 affinity groups they identified with,</li> <li>• Whether they would like to be represented on the Thrive Engagement Map</li> </ul>
Thrive Engagement Map opt-in	

Community insights regarding job availability, worker resources for job access, and partnerships	Open-ended questions to gather survey respondents' perspectives on employment and economic development in the Inland SoCal region.
Additional thoughts	Partnerships section sought to gather names and information on local organizations relevant to Thrive Inland SoCal's efforts in Inland Southern California.

Responses were divided between barriers and solutions based on the tone and wording of the response. Respondents were more likely to present solutions than to identify barriers and tended to provide brief one- or two-word responses. Where more than one theme was present, the response was coded with multiple themes.

### Survey findings by SRT and outreach committees

The following themes and definitions are a result of a meta-analysis conducted on 150 survey responses.

Theme	Definition
Building Cultural and Social Capital	This theme includes responses related to knowledge of existing services and programs, information silos and language barriers, competition and scarcity mindsets, and lack of involvement with disadvantaged communities and minority groups
Career Pathways	This theme includes responses related to a lack of job opportunities in the region, especially entry level jobs without higher education requirements, career support such as resume building and career planning, and quality jobs with livable wages
Childcare Access	This theme includes responses related to the high costs of childcare and the opportunity costs of utilizing childcare, distance to childcare facilities, and lack of knowledge on good childcare programs
Education and Training Access	This theme includes responses related to barriers to higher education due to tuition costs, location and commute times, and lack of knowledge about existing resources for tuition assistance and education planning
Housing	This theme includes responses related to affordable housing, rent control policies, and services for homelessness.  Employer supported housing was a theme the strategy authors wanted feedback on, but most survey respondents discussed affordable housing in general, not employer supported housing specifically.
Entrepreneurship	This theme includes responses related to financial barriers including access to capital, high insurance costs, and access to investors
Technology Access	This theme includes responses related to lack of internet access or poor connectivity and lack of technology devices such as cell phones to access public transportation and computers to access online job interviews and applications
Transportation Access	This theme included responses related to insufficient public transportation, commute times, the inability to rely on highways due to weather events and construction, gas prices, and insufficient infrastructure for electric vehicles

Thematic breakdowns by SRT and committee reflect the percentage of responses indicating one or more of the themes that emerged from the analysis of barriers and solutions. Significance tests were not conducted for these results.

<b>Barriers identified by respondents</b>	
Building Cultural and Social Capital	All but 2 SRTs, High Desert and Coachella Valley/Morongo Basin, indicated some level of barrier related to building cultural and social capital.
Career Pathways	<p>Every SRT indicated that Career Pathways was a barrier.</p> <p>35 percent of Unaffiliated respondents, 30 percent of respondents in Greater Riverside and Western San Bernardino respectively, were in the top 3 of SRTs listing Career Pathways as a barrier.</p> <p>Within their respective SRTs, Greater San Bernardino, Southwest Riverside and High Desert had the highest percentage of respondents who indicated Career Pathways were a barrier.</p>
Childcare Access	Business and Committee Leaders Committee had the highest percentage of respondents indicating that Childcare Access was a barrier.
Education and Training Access	<p>Business and Community Leaders Committee had the highest percentage of respondents among all SRTs (26 percent) who indicated an Education and Training access barrier.</p> <p>Community, Arts &amp; Culture Committee had the second highest percentage at 25 percent of respondents</p> <p>Within a single SRT, 21 percent of respondents within Western San Bernardino cited Education and Training access as a barrier.</p> <p>Within their respective SRTs, Greater San Bernardino, Southwest Riverside and High Desert had the highest percentage of respondents who indicated Education and Training were a barrier.</p>
Housing	Greater Riverside and Western San Bernardino were the only two SRTs in which respondents noted housing as a barrier.
Entrepreneurship	Greater San Bernardino and Unaffiliated respondents were the top two groups listing Entrepreneurship as a barrier.

Technology Access	17 percent of respondents in Coachella/Morongo Basin noted technology access as a barrier. 3 percent in Greater Riverside noted technology access as a barrier
Transportation Access	Western San Bernardino and Coachella Valley/Morongo Basin respondents were the top two groups listing Transportation Access as a barrier.

### **Solutions identified by respondents**

Building Cultural and Social Capital	Community, Arts & Culture Committee had 29 percent of responses and Business and Community Leaders Committee had 26 percent of responses indicating Building Cultural and Social Capital as a solution, the two highest among the SRTs.
Career Pathways	Within their respective SRTs, Greater San Bernardino and Greater Riverside had the highest percentage of proposed solutions related to Career Pathways. The highest percentage of proposed solutions for Southwest Riverside were related to Career Pathways.
Childcare Access	With the exception of High Desert, Southwest Riverside and Unaffiliated respondents, all SRTs proposed Childcare Access as a solution.
Education and Training Access	56 percent of the High Desert SRT respondents proposed or indicated a need for solutions to Education and Training Access – the highest among all SRTs. Within their respective SRTs, Southwest Riverside, Greater San Bernardino, Western San Bernardino, Greater Riverside as well as respondents who were Unaffiliated had the highest percentage of proposed solutions related to Education and Training Access.
Housing	With the exception of the Business and Community Leaders Committee, Coachella Valley/Morongo Basin, and Unaffiliated respondents, all SRTs proposed affordable housing programs as a solution.
Entrepreneurship	Business and Community Leaders Committee and Community, Arts & Culture Committee had the two highest percentages of solution-oriented responses for Entrepreneurship.
Technology Access	Community, Arts & Culture and High Desert had the highest percentage of respondents offering solution-oriented responses for Technology Access.
Transportation Access	Coachella Valley/Morongo Basin had the highest percentage of proposed transportation access solutions.

# Appendix D. Assessing Climate, Energy, and Environmental Impacts

## Introduction

The Thrive Inland SoCal Project report provides an extensive assessment of the climate, energy, and environmental landscape in Riverside and San Bernardino counties. Funded by California Jobs First, formerly known as the Community Economic Resiliency Fund (CERF), the project aims to build a resilient, equitable, and sustainable economy in the region. The research highlighted in this report focuses on the environmental impacts of the existing logistics industry and explores the environmental impact of potential economic growth strategies. Furthermore, it includes an assessment of current programs designed to mitigate the region's environmental impact. Together, these research efforts offer valuable insights into the region's challenges and opportunities and provide critical information to guide the development of sustainable and equitable economic policies.

## Logistics industry environmental impact

This research examines the significant role of the logistics industry in contributing to regional greenhouse gas (GHG) emissions, focusing on the energy use and emissions from warehouses and transportation. The logistics industry is a significant economic driver in the SoCal Inland Region, contributing substantially to regional GHG emissions. Central to this industry, warehouses have large energy demands typically met by fossil fuel-powered grid energy. Additionally, transportation emissions from medium- and heavy-duty vehicles (MHDVs) play a critical role in the region's environmental footprint. However, the precise GHG emissions from the logistics industry are not well understood, and a central objective of this analysis is to estimate these emissions. The analysis also estimates the potential for rooftop solar installations on warehouses to offset energy use emissions and discusses the impact transitioning to zero-emission vehicles will have on reducing transportation emissions. By addressing both energy consumption and transportation, this research aims to provide a comprehensive understanding of the logistics industry's environmental impact and potential mitigation strategies.

## Warehouse energy use

A central component of the logistics industry are warehouses which can span more than 1,000,000 ft<sup>2</sup>. Due to their size, the buildings can have significant energy demands that are typically met with energy from the grid that is powered, to an extent, by fossil fuels. To improve our understanding of the GHG emissions associated with the logistics industry in the Inland SoCal Region we estimated GHG emissions associated with existing and planned warehouses across the region.

We estimate that there are approximately 470 million square feet of warehouses in the region (Table 1). This corresponds to an estimated warehouse energy use in the Inland SoCal Region of approximately 8 GWh annually which is associated with emissions of approximately 490,000 MTCO<sub>2</sub>e per year. Approximately 170,000 MTCO<sub>2</sub>e are associated with warehouses in Riverside County, and the other 320,000 MTCO<sub>2</sub>e are associated with warehouses in San Bernardino County. To put these results into context, in 2017 Riverside County emitted approximately 5,000,000 MTCO<sub>2</sub>e across all sources, and San Bernardino emitted



approximately 16,000,000 MTCO<sub>2</sub>e across all sources in 2016. After adjusting for the age of the county GHG emission estimates, we estimate that warehouse energy usage is responsible for approximately 2-3 percent of all GHG emissions in the Inland SoCal Region.

**Table 1. Estimates for warehouse area, energy use and emissions in Inland SoCal**

	<b>Cumulative Warehouse Area (ft<sup>2</sup>)</b>	<b>Warehouse Energy Consumption (MW) per Year</b>	<b>Direct Warehouse Emissions (MTCO<sub>2</sub>e) per Year</b>	<b>All-Source Emissions (MTCO<sub>2</sub>e)</b>
<b>Riverside</b>	163,054,078	2,770,916	170,133	4,905,518 (2017)
<b>San Bernardino</b>	306,914,564	5,215,660	320,239	15,974,244 (2016)
<b>Total</b>	469,968,643	7,986,577	490,372	20,879,762 (2016-2017)

*Source: CSE analysis. Note: For comparison, the table includes estimates of all-source GHG emissions for Riverside and San Bernardino Counties. However, the all-source estimates were performed in 2016 and 2017 and are not directly comparable.*

While our analysis provides valuable insights into the GHG emissions from warehouse energy use in the Inland SoCal Region, it has several limitations. The GHG emission intensity values, based on a sample of warehouses, may not fully represent the diversity of operations and energy efficiency that characterize warehouses in the region. Additionally, the building footprint data may contain inaccuracies especially for warehouses built recently. Moreover, the analysis does not account for potential future changes in energy use or emission intensity due to, e.g., energy efficiency measures and increased renewable integration into the grid, which could significantly impact future emissions. Therefore, our estimates offer a useful high-level approximation but should be interpreted with these limitations in mind.

### **Warehouse solar potential**

The substantial size of warehouses results in high energy usage but also presents a significant opportunity to generate energy through rooftop solar installations. Accordingly, we investigated the potential for solar installations on the extensive rooftops of regional warehouses. By evaluating the potential energy generation of these solar systems, we aim to identify effective pathways to mitigate the environmental impacts of the logistics industry.

This approach resulted in estimates of approximately 100-150 million ft<sup>2</sup> and 180-290 million ft<sup>2</sup> of total rooftop area suitable for PV systems in Riverside and San Bernardino counties, respectively (Figure 2). These values correspond to potential annual PV energy generation of 9,000 - 15,000 GWh per year. If we assume that all the energy generated by rooftop solar installations replaces energy that would have been consumed from the grid, this would

correspond to a reduction of 2.3 - 3.5 million metric tons of CO<sub>2</sub>e per year, significantly surpassing the 490,000 MTCO<sub>2</sub>e per year we estimated for warehouse energy use in the region (Figure 1). This suggests that installing rooftop solar on 14-21 percent of the warehouses could potentially offset the GHG emission associated with warehouse energy use in the Inland SoCal Region.

**Table 2. Estimated suitable area for rooftop solar on warehouses, corresponding potential PV system capacity, system energy generation, and potential GHG reductions in Inland SoCal**

	<b>Suitable Rooftop Area (millions of ft<sup>2</sup>)</b>	<b>Potential PV System Capacity (GW)</b>	<b>Potential PV Energy Generation (GW)</b>	<b>Avoided GHG Emissions (millions of MTCO<sub>2</sub>e)</b>
<b>Riverside</b>	98 – 152	2.0 – 3.0	3,332 – 5,171	0.8 - 1.2
<b>San Bernardino</b>	184-288	3.7 - 5.8	6,271 – 9,816	1.5 – 2.3
<b>Total</b>	282-440	5.6 – 8.8	9,604 – 14,988	2.3 – 3.5

Source: CSE analysis.

This analysis of rooftop solar potential for warehouses in the region has several limitations that need to be considered. Firstly, we assumed that there are no existing solar PV systems on the warehouses which likely results in an overestimation of potential capacity. Additionally, warehouse size was used to determine roof size without accounting for the structural integrity of roofs for supporting solar panels, which could limit potential capacity. The variability in rooftop orientation, shading, and obstructions were not directly considered, which could also impact the efficiency and feasibility of solar installations. Moreover, connecting significant amounts of solar to the grid would likely require substantial upgrades to existing infrastructure, which could limit the potential solar integration capacity. Finally, we did not account for the timing of energy use, which would likely not correspond exactly with PV energy generation, thus limiting the ability of solar to offset energy use and decrease emissions.

### Transportation emissions associated with the logistics industry

Medium- and heavy-duty vehicles (MHDVs) are integral to the warehouse and logistics industry, utilizing various vehicle types for transport. MHDVs are a disproportionate source of GHG and particulate matter emissions. We estimate that there are approximately 115 million MHDV trips per year associated with the logistics industry in the region (Figure 3). This corresponds to an estimate of over 4 billion miles driven in the region by the MHDVs and emissions of

approximately 5 million MTCO<sub>2e</sub> per year. After adjusting for the age of the county GHG emission estimates, we estimate that MHDVs associated with the logistics industry are responsible for up to 20-25 percent of all GHG emissions in the Inland SoCal Region (see the limitations of the analysis below). In addition to GHG emissions, MHDVs are also associated with other harmful emissions. Estimated emissions by these vehicles totals approximately 70 MT of diesel particulate matter and 8,000 MT of NO<sub>x</sub> per year across the region.

**Table 3. Estimated number of trips, miles driven, and emissions associated with MHDVs and the logistics industry in the region**

	<b>MHDV Trips per Year (millions)</b>	<b>MHDV Miles (millions) per Year</b>	<b>CO<sub>2</sub> Emissions (millions of MT)</b>	<b>NO<sub>x</sub> Emissions (MT)</b>	<b>Diesel PM<sub>2.5</sub> Emissions (MT)</b>
<b>Riverside</b>	40	1,516	1.7	2,819	25
<b>San Bernardino</b>	75	2,854	3.2	5,307	47
<b>Total</b>	115	4,370	4.8	8,127	72

Source: CSE analysis.

The emissions associated with the logistics industry can be mitigated through the transition to zero-emission vehicles. The California Air Resources Board (CARB) has outlined comprehensive strategies for the electrification of medium and heavy-duty vehicles. California has developed regulations to facilitate the transition to zero emission MHDVs. Specifically, requirements for drayage fleets mandate that beginning in 2024, all new drayage trucks must be zero-emission vehicles (ZEVs) and by 2035 drayage services can only be performed by ZEVs. From the 2036 model year onwards, all regulated Class 2b-8 vehicles produced or delivered for sale in California must be ZEVs. This will require significant charging infrastructure to support the increased demand for electric vehicle charging, ensuring that the fleet of zero-emission MHDVs can operate efficiently and reliably throughout the regions. The electrification of transportation will have a significant impact on GHG and other harmful emissions across the region.

There are several major caveats to this analysis. First, the analysis is based on a number of critical assumptions such as the number of truck trips per warehouse based on the size of the warehouses. These assumptions were based on limited amounts of data and may not be representative of smaller warehouses. Additionally, the current emission estimates do not account for vehicle idling, which can significantly contribute to total emissions near warehouses and likely results in underestimating the actual emissions. Moreover, we do not know the variability of MHDVs in terms of their efficiency, and it is likely that some already incorporate hybrid and other more efficient technologies. Furthermore, variations in warehouse operational practices, such as the frequency of loading and unloading activities and the types of goods transported, can also influence the emission estimates. Future analyses should consider these factors to provide a more accurate assessment of MHDV-related emissions in the region.

## Discussion

Overall, our estimates provide a high-level approximation of the environmental impacts associated with the logistics industry in the Inland SoCal Region. These estimates should be interpreted with caution, considering the limitations and assumptions inherent in the analysis. Future work should aim to refine these estimates by incorporating more detailed data on warehouse operations and vehicle characteristics. By addressing these factors, we can develop a more comprehensive understanding of the environmental impacts of the logistics industry and pathways to mitigate these impacts in this region. Although there were significant limitations to our approach, it did allow us to draw several conclusions:

- Emissions associated with MHDVs and the logistics industry result in a significant portion of all GHG emissions for the region and they are a significant source of other harmful emissions such as diesel PM2.5;
- Energy consumption by warehouses across the region is associated with significantly less GHG emissions than from MHDVs, but is still a significant source of GHG emissions for the region;
- Warehouse rooftops likely present a significant opportunity for solar energy generation and could offset GHG emissions from warehouse energy use (not including MHDVs) during the daylight hours.

Warehouses in the SoCal Inland Region consume a considerable amount of energy from the grid, contributing an estimated 2-3 percent of the region's total GHG emissions. However, the flat rooftop areas that characterize these warehouses present a significant opportunity for solar installation, which could completely offset daytime energy use (Table 1 and 2). The addition of energy storage systems could further supply emission-free energy when solar panels are not generating power. Further, while we did not investigate energy efficiency measures due to a lack of warehouse-specific data, it is likely that such measures would be a cost-effective way to reduce energy consumption and emissions.

Although the direct energy use by warehouses is a significant contributor to GHG emissions across the region, it is relatively minor compared to the transportation emissions associated with the logistics industry. We estimated that MHDVs associated with the logistics industry contribute up to 20-25 percent of all GHG emissions across the region and also emit large quantities of other harmful pollutants (Table 3). This problem will be mitigated as transportation is electrified. However, this will be a relatively slow process which will likely take several decades before emissions reach acceptable levels. The region can facilitate the transition to electric MHDVs by ensuring adequate charging infrastructure is in place and by providing businesses and fleet owners with information about new clean transportation technologies and programs that support the purchase of electric trucks and chargers.

## Data and Methodology

To estimate warehouse GHG emissions, we used energy benchmark data for warehouses in California sourced from the California Energy Commission which provides the GHG emission intensity for a sample of warehouses across California. We filtered this data to focus on warehouses located in San Bernardino and Riverside counties and calculated their average GHG emissions intensity (kgCO<sub>2</sub>e/ft<sup>2</sup>). We then used data from the Warehouse City project in combination with building footprint data to estimate the building area of all warehouses across

the SoCal Inland Region. Finally, we estimated the GHG emissions for each warehouse in the region by multiplying the average GHG emission intensity factor by the area of each warehouse.

To assess the solar potential of warehouse roofs in the region, we used the warehouse footprints estimated above and assumed that the area of the warehouse footprint was equivalent to the rooftop area. We also assumed that no rooftop solar installations currently exist on any of the warehouses. We then used two approaches to estimate the percentage of collective roof area suitable for PV systems. For the lower-end estimate, we based our calculations on an NREL report indicating that, in general, approximately 60 percent of rooftop areas are suitable for PV installation. For the upper-end estimate, we employed the US Department of Housing and Urban Development's methodology for calculating building rooftop area. Although this method required the width and length of the building, which were not available, we assumed the rooftop area to be square and applied a six-foot setback due to fire code requirements. Together, this approach allowed us to estimate the maximum potential rooftop area suitable for PV systems on warehouses across the region.

Once we had the suitable rooftop area estimates we converted the rooftop areas into PV system size in kW using a standard formula provided by NREL (<https://pvwatts.nrel.gov/pvwatts.php>). Next, we used the NREL PVWatts tool (<https://pvwatts.nrel.gov>) to estimate the total annual energy generation which takes into account the local climate and standard system specifications on energy generation. Finally, we utilized the EPA's equivalency calculator which accounts for regional grid characteristics (<https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>) to estimate the avoided GHG emissions associated with the PV generation.

To estimate emissions from MHDVs, we utilized the approach detailed in the Warehouse CITY tool developed by Radical Research LLC.<sup>3</sup> Specifically, the Warehouse CITY tool assumes that there are 0.67 MHDV trips per 1,000 square feet of warehouse space. The average MHDV trip is assumed to be 38 miles based on data provided to Radical Research from Streetlight. The emission values are derived from the 2022 EMFAC fleet-average estimates for the South Coast Air Quality Management District (SCAQMD).

## **Growth strategies and climate impacts**

This research assesses the environmental impacts associated with various economic growth strategies in the Inland SoCal region, providing insights into how economic development can impact GHG emissions and other environmental factors. Specifically, it compares emissions across sectors, including business services, cleantech, advanced manufacturing, logistics and clean supply chains. By understanding these impacts, stakeholders can make informed decisions that maximize sustainable economic growth in the region.

### **GHG emissions of growth strategies**

The various sustainable economic growth strategies being considered have a wide range of climate impacts per job added (Table 4). At the low end, the business services strategy has a low impact of roughly 1 ton of CO<sub>2</sub> per job per year, mostly from the energy use in office buildings. Cleantech jobs that center on software development will have a similar profile. Advanced manufacturing businesses that focus on producing fabricated or electronic products produce roughly 5-10 tons of CO<sub>2</sub> per job per year. These higher emissions are due primarily to equipment electric power requirements. Cleantech jobs such as solar panel assembly, battery assembly or power electronics manufacturing will have emissions in this range. Strategies such as Clean Supply Chains and some forms of Advanced Manufacturing have emissions in the 20-

40 tons/job/year range. In both cases, these emissions are largely driven by transportation vehicles in the case of Clean Supply Chains, and by high temperature processes in the case of manufacturing plastics and rubber components, food and beverage products, and foundries.

Manufacturing of primary materials, such as iron or steel, cement, aluminum, and chemicals is associated with much higher emissions, 200 or more tons/job/year, and in some cases much more. These emissions come from a combination of high fuel use required for very high temperature processes and emissions that are inherent to the material itself.

All growth strategies considered have pathways to reduce the emissions per job and eventually reach zero emissions in the future, but those pathways depend on the current source of emissions. Office-based jobs and manufacturing jobs that use electricity for power will decline in carbon intensity as renewable energy supplies a greater percentage of the electrical grid. Industries that use fuel for transportation or process heat will have to shift to electric heat sources and transportation, both of which are in the early stages of expansion. Clean Supply Chains businesses have the potential to offset some emissions by using their large roof area to host solar generation resources as well. Finally, high emissions materials industries will require new technologies for decarbonization, such as hydrogen-based iron and steel production, carbon capture and sequestration, or other new approaches. In many cases, early examples of these technologies exist, but may currently be only at the pilot plant or demonstration level.

**Table 4. Climate impacts by priority industry sectors**

<b>GHG Impact</b>	<b>Sector</b>	<b>Description</b>	<b>Notes</b>
Low ~1 MTCO <sub>2</sub> e per year per job	Professional/ business services	Office-based jobs with low energy needs outside of building environmental control and commuting	<ul style="list-style-type: none"> <li>• Impact can be mitigated by reduced commuting distance and frequency, and through electrification of light-duty fleet</li> <li>• Additional mitigation through energy efficient building standards</li> <li>• Reducing CO<sub>2</sub> intensity of electricity will also mitigate impacts</li> </ul>
	Cleantech (business services subset)	Software for grid coordination, planning, power management, demand response	<ul style="list-style-type: none"> <li>• Climate impacts similar for office positions, possibly higher computing power needs</li> </ul>
Medium ~5-10 MTCO <sub>2</sub> e per year per job	Advanced manufacturing	Aerospace manufacturing, metal fabrication, machinery, semiconductor and electronics products	<ul style="list-style-type: none"> <li>• Manufacturing has higher energy needs due to electricity or fuel use for material forming and processing operations</li> </ul>
	Cleantech (manufacturing subset)	Solar panel assembly, power electronics products, semiconductor products, and battery assembly	<ul style="list-style-type: none"> <li>• Impacts similar to other advanced manufacturing activities - energy use in material forming and processing operations</li> </ul>

			<ul style="list-style-type: none"> <li>Reducing CO2 intensity of electricity in combination with electrifying operations that currently use fuel onsite (heat treatment, other high-temperature processes) will reduce climate impacts</li> </ul>
High ~20-40 MTCO2e per year per job	Clean supply chains/logistics	Management, movement and storage of goods.	<ul style="list-style-type: none"> <li>Impact dominated by fuel use in transportation</li> <li>Shifting to electric vehicles will reduce climate impact</li> <li>Reducing energy use and integrating rooftop solar in logistics warehouses will mitigate impact</li> </ul>
	Advanced manufacturing	Production of plastics and rubber products, foods and beverages, textiles and foundries	<ul style="list-style-type: none"> <li>Climate impacts are due to higher energy needs in process, more high temperature processes</li> <li>Mitigation possible through greening of electricity grid and electrification of high temperature processes that currently use fuel</li> </ul>
Very High >200 MTCO2e per year per job	Materials manufacturing	production of iron, steel, aluminum, cement, and chemicals	<ul style="list-style-type: none"> <li>Impacts come from a combination of fuel use to generate very high process temperatures and inherent emission of GHG through chemical processes in manufacturing</li> <li>Electrification of process or shift to alternate fuels can reduce climate impacts in some cases (iron and steel)</li> <li>Alternate process development required to eliminate inherent emissions for cement, aluminum production</li> </ul>

### Other environmental risks of growth strategies

Advanced manufacturing, Clean Supply Chains and Cleantech businesses can pose additional risks of environmental harm, however these industries include a wide range of very different activities. As a group, they all have risks of air, water and solid waste pollution, but individual businesses may be safe in one or more of these areas due to good pollution prevention practices, the nature of their business, or both (Table 5).

In general, businesses have a variety of strategies available to reduce their environmental impact. The air pollution risks differ depending on the manufacturing type, but mitigation strategies broadly include identifying alternate materials, changing processes to capture and recycle pollutants instead of releasing them, and treating plant exhaust to burn or neutralize pollutants. Water pollution is similarly managed through a combination of material selection, process modification and onsite water treatment. Solid waste pollutants are managed through recycling where possible, as well as incineration for energy recovery.

Businesses within a manufacturing category have a wide range of varying pollution profiles depending on their specific processes, mitigation strategies and level of corporate responsibility. Maintaining a low pollution risk for the community requires identifying good operators, mandating good practices and monitoring behavior. State and federal regulatory frameworks already support these efforts.

**Table 5. Environmental impacts other than GHG emissions by priority sector**

Business Sector	Risk Types	Mitigation Strategies	References
Professional/Business Services	--	--	--
Cleantech (business services subset)	--	--	--
Advanced manufacturing	Water contamination	Process modification	<a href="https://www.epa.gov/trinationalanalysis/">https://www.epa.gov/trinationalanalysis/</a>
		Material substitution	EPA TRI analysis for aerospace manufacturing specifically: <a href="https://www.epa.gov/toxics-release-inventory-tri-program/aerospace-manufacturing-sector-pollution-prevention-p2">https://www.epa.gov/toxics-release-inventory-tri-program/aerospace-manufacturing-sector-pollution-prevention-p2</a>
		Onsite water treatment	
	VOC releases	Process modification (enclosure of solvent processes)	
		Process/material substitution (solvent for aqueous degreasing)	
	Recycling		
	Solid waste	Material substitution	



		Process modification	
		Onsite/offsite recycling	This is the searchable EPA toxic release database that everything at left is based on: <a href="https://enviro.epa.gov/facts/tri/p2.html">https://enviro.epa.gov/facts/tri/p2.html</a>
Semiconductor and electronics	Water contamination	Process modification	
		Material substitution	
		Onsite water treatment	
	High GHG/ Air pollution potential	Material substitution	
		Exhaust treatment to decompose materials	
		Process modification	
	Solid waste	Material substitution	
		Process modification	
		Onsite/offsite recycling	
Plastics manufacturing	VOC (especially styrene)	Process modification	
		Material substitution	
		Energy recovery (burning off exhaust for heat/energy)	
	Solid waste	Product modification	
		Process modification	
		Onsite/offsite recycling	
Food and beverage manufacturing	Water contamination (nitrate)	Onsite water treatment	

## Contextualizing environmental impacts of development strategies

Comparing the environmental impacts of the target development strategies to the existing environmental risk landscape in the region can be considered two ways. First, we examined the list of contaminated locations in the region to identify if these business types have a legacy of pollution in this area. Of the 114 superfund sites identified in the region, 33 are from spills resulting from one-time events, improperly stored materials, or drug labs. A further analysis shows that illegal dumps or landfills that did not properly segregate and manage hazardous waste account for 17 sites. These are the two largest categories of contaminated sites. Additionally, chemical, ordnance, or pyrotechnic businesses have contaminated 15 locations. Another nine locations are classified as plating or coating businesses (which could potentially be considered “advanced manufacturing”), and two sites are metal manufacturing facilities. Development projects that include businesses of this type will need to ensure that current waste reduction, storage, and disposal regulations are followed to reduce risks from this type of manufacturing activity. Of the remaining contaminated sites that can be classified, the military (seven sites) and mining and smelting (seven sites) are the two largest categories. Overall, these results suggest that manufacturing as a whole is not primarily responsible for legacy environmental issues in the region, however specific categories of manufacturing, particularly plating and coating, chemical manufacture and processing, and pyrotechnics manufacturing warrant particular attention to ensure compliance with environmental regulations. In addition, the prevalence of illegal dump sites indicates the need for enforcement of waste disposal regulations more broadly.

The second approach to contextualizing the environmental risks of these growth strategies is examining the recent record of toxic material releases in the region. In 2022, of the top 20 emitters in the region, half could fall in the category of advanced manufacturing, in particular, manufacturers of plastic or rubber products, fabricated metals, or transportation equipment. However, looking at the 87 companies in those categories that reported toxic emissions, there is a broad range of performance within each category, with some facilities recycling a large fraction of their waste or treating it onsite rather than releasing toxic materials. Across those three categories, 63 percent of companies reduced their emissions by 95 percent or more through treatment and recycling, and 10 percent reported having no emissions at all. This data suggests that supporting sustainable growth in the region through the advanced manufacturing strategy need not result in environmental harm, provided that companies follow robust practices (as required by existing federal and state regulations) to reduce and manage waste safely. This suggests that investing in inspection and enforcement resources, as well as support and guidance to help companies upgrade their practices, may be helpful for minimizing the environmental impacts of growth.

## Environmental mitigation programs

We also provide an overview of various initiatives aimed at promoting environmental sustainability, energy efficiency, and emissions reduction in California. The entries include diverse types of programs, plans and regulations including financial incentives for renewable energy installations, regulatory measures to limit vehicle and industrial emissions, and plans for developing energy-efficient infrastructure and buildings. These efforts collectively aim to improve air quality, reduce greenhouse gas emissions, and support the transition to a sustainable economy.

The table was created using information sourced from the Alternative Fuels Data Center, DSIRE database, state and local government agency websites, and other web sources. Each entry includes sources and references, some of which may contain multiple links. The sources range

from state and federal websites to program-specific and utility-specific websites. However, due to time constraints this document does not include every relevant program or regulation/law available in California or the Inland Empire Region. Instead, we focused on identifying and summarizing the largest and most relevant programs to provide an overview of significant environmental impact mitigation efforts. That table can be found [here](#).

## **Water agencies**

This analysis covers the broad regional issues related to water quality, supply and reliability. The 98 water districts in the region (76 in San Bernardino County, 22 in Riverside County) will have individual concerns and issues related to local contamination and treatment requirements, encouraging customer conservation efforts in response to state-mandated consumption reductions, local infrastructure maintenance and upgrades, and the financial challenges of supporting upgrade costs while consumption decreases. Further research is needed to survey these stakeholders and identify their particular challenges, specifically efforts to identify common themes or opportunities for larger-scale investment. Understanding local water district issues in greater detail will also help identify areas with the necessary capacity to support particular development projects.



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