

TALENT
REWIRE



**Securing a Successful Future for
Workers, Communities, and Businesses:
Advanced Manufacturing
Apprenticeship Program Case Study**

By: Talia Alongi



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The Challenge

For decades, the development of highly technical industries has been concentrated in a few large metropolitan areas, limiting potential economic benefits at the regional level and access to opportunity at the individual worker level.¹ Businesses in these industries are looking for an available, abundant, and skilled talent pool, but have historically cultivated limiting mental models of what that talent pool looked like in terms of demographics, education background, and experience.² Recent federal funding initiatives that support the tech industry's regional expansion have demonstrated³ that this regional imbalance can be reset⁴ with the right intentionality, support systems, cross-sector collaboration, and incentives. Additionally, in the workforce development field, the rise of skills-based hiring⁵ offers a more equitable approach to securing that coveted talent pool. When these things are in place, it frees up employers to choose operating locations based on other strategic priorities if they know there are viable ways of building the workforce they need.

California's Monterey Bay region, where the agriculture, healthcare, and hospitality/service industries are the leading employers, illustrates this challenge of aligning business' demand for talent with the local workforce and broader workforce ecosystem—specifically within the advanced manufacturing sector. Despite the over 140,000 active job-seekers in the region, Joby Aviation (Joby), an aerospace company developing electric air taxis for commercial passenger service, experienced difficulty in sourcing local talent for their technician roles due to the limited number of individuals with existing advanced manufacturing experience. This was further exacerbated by the lack of a mature advanced manufacturing workforce training pipeline available in the region.⁶

The Model

Inclusive economic development is a way of cultivating a regional economy that ensures economic inclusion and expands opportunity to all residents. Joby's Advanced Manufacturing Apprenticeship Program (AMAP), developed in partnership with Monterey Bay Drone, Automation, and Robotics Technology (DART) and the James Irvine Foundation, offers an innovative model to support inclusive economic development through **partnership between private business, local community members, and regional economic stakeholders**. This emergent apprenticeship pilot is already demonstrating a range of benefits within two years of its inception: a paid training pathway providing high-quality jobs for local community members in a growing tech industry, and state-level policy support, with the potential to diversify the region's economy.

“The hiring challenges and growing pains we faced as a company made us more open to doing things differently like making the hiring process more accessible. We had to be open to different avenues for sourcing talent and seeing the connection between nontraditional backgrounds and the role we were hiring for—we got more creative.”

PETER CHURCH, AVIATION EDUCATION PROGRAM MANAGER, JOBY AVIATION

The AMAP model has implications for businesses, local workers, workforce systems, and regional economies in their shared path to inclusive economic development. These implications are particularly relevant to **new emerging industries in the tech space**, especially those that align with federal clean energy and infrastructure funding and are looking to locate in rural regions:

- For businesses, this model builds a local talent pipeline where one may not currently exist, particularly in rural areas where relocating talent may prove difficult.
- Hiring local talent often means lower hiring costs, quicker onboarding, greater retention and loyalty, and a more resilient talent pipeline less vulnerable to labor supply shortages. It also may facilitate getting to market faster, which is particularly important for those developing emerging technologies.
- For local workers, AMAP provides an earn-and-learn model for upskilling or reskilling local community members into high-quality jobs with pathways to advancement. This can be transformative for an area like the Monterey Bay region, where communities of color constitute the majority of those in low-paying, low-mobility jobs like manual crop harvesting, retail, and housekeeping in hospitality.^{7,8}
- For the regional economy, securing the commitment and retention of high-tech industries such as advanced air mobility distributes economic growth more equitably outside of metropolitan areas, creates more opportunities for upward mobility, and provides a more diverse and resilient economic base. Research shows that for every job in the high-tech sector created, approximately 4.3 secondary jobs are added in local goods and services sectors, creating a multiplier effect.⁹

What Is Apprenticeship?

Apprenticeship is a proven approach for preparing workers for jobs while meeting the needs of business for a highly skilled workforce. It is an employer-driven, “learn-while-you-earn” model that combines on-the-job training, provided by the employer that hires the apprentice, with job-related instruction in curricula tied to the attainment of national skills standards. A Registered Apprenticeship must meet certain standards, including progressive increases in an apprentice’s skills and wages. It is approved either by the US Department of Labor’s Office of Apprenticeship or by the California Department of Industrial Relations’ Division of Apprenticeship Standards.¹⁰



It's worth noting that AMAP is an emerging model, and we expect both the impacts and lessons learned to grow with time. Apprenticeships themselves are nothing new, but AMAP's cross-sector collaboration inclusive of **community-based organizations (CBOs)** led to more than a workforce pathway addressing one company's hiring challenge. Rather, the way AMAP leveraged these partnerships unlocked state-level support for new industry while also providing high-quality jobs and access to those jobs for local community members.

“Electric propulsion is on the verge of transforming aviation and human mobility, just like jet propulsion did in the 1960s. The adoption of new technologies creates opportunities for workers to learn new skills, setting the stage for long-term career growth and economic mobility. In times of great technological change, employers play an important role in redeploying human capital for the betterment of society.”

CODY CLEVERLY, WORKFORCE DEVELOPMENT LEAD, JOBY AVIATION

Joby Aviation was operating in Marina, CA and entering a new phase of business in building out its manufacturing workforce as they shifted from R&D to the pilot production phase of their electric vertical take-off and landing (eVTOL) aircraft. The business needed manufacturing employees and wanted the pilot production facility to be near their R&D facilities; and local economic development players were motivated to retain Joby and create jobs locally while also supporting the growing Advanced Air Mobility (AAM) industry in the Monterey Bay region. Monterey Bay DART was coordinating the regional and state-level effort to support Joby's facilities expansion needs, and a study conducted by DART identified a growing number of manufacturing jobs in the region parallel to the Joby expansion. At the same time, surveys with employers, community-based organizations, and local government indicated a skill and training gap in the area.¹¹

“I had assumed that high-tech industries meant fewer jobs. We took the risk to go out and develop new relationships and found that it's not eliminating jobs, [but] it's bringing in different kinds of jobs. And that's going to happen anyway, so we might as well design it from the beginning to benefit the community.”

MARIA ELENA MANZO, DIRECTOR, MUJERES EN ACCIÓN

Parallel to these developments, local CBOs were repositioning themselves as valued actors in inclusive economic development, building on their efforts to help Joby understand the skills and aptitudes of the local workforce and to connect community members with paid earn-and-learn career pathways that provide upward mobility.



The AMAP model has three important components:

- A trusted **economic development organization** leveraging strategic industry insights to **convene** cross-sector interests and **facilitate** coordinated action.
- A **company** that needs to identify a talent pipeline and has a motive to operate in a specific community.

- An **ecosystem of CBOs and workforce stakeholders** who understand and serve diverse sections of the community and are willing to collaborate to create more equitable earn-and-learn pathways that provide economic mobility.

Monterey Bay DART initiative (a 501 c3 public benefit corporation) played the critical role of a **trusted economic development organization** to bridge the gap between the employer, the workforce system, and CBOs. DART is positioned as an industry-focused economic development organization with a vested interest in supporting the region's competitive future and knowledge of AAM jobs and industry challenges. The initiative emerged directly from the Fort Ord Reuse Authority (FORA) Economic Development Program, which was charged with guiding the regional recovery from the 1994 closure of Fort Ord. The Black and Brown communities that supported base operations experienced outsized job loss and economic impacts. In this pilot, DART supported relationship and trust building between Joby and CBOs, identified shared goals, and proposed the timely AMAP pilot to build effective partnerships across a diverse set of stakeholders. DART was centrally involved in the regional and state-level efforts to secure Joby's Marina expansion and developed relationships across industry, government, academia, and CBO community members. They played an important bridge role in helping CBOs communicate the needs and talent assets of the local community to an employer audience, and to help employers navigate a complex ecosystem of CBOs.

“The involvement of Black communities in the DART [economic development mission] stretches back to the 1994 closure of the former Fort Ord and the devastating economic impact to Black communities. Because DART emerged from the Fort Ord Reuse Authority (FORA) Economic Development program, which had long-term goals of regional economic recovery focused on closure-impacted communities, we see the opportunities created through the DART-Joby AMAP as a realization of those economic recovery goals. Cross-sector collaboration was the key to unlocking this new aerospace earn-and-learn pathway that will strengthen the resiliency of the regional economy.”

ROSALYN GREEN, FOUNDER, MONTEREY COUNTY BLACK CAUCUS AND CHAIR OF THE MONTEREY PENINSULA COMMUNITY COLLEGE DISTRICT BOARD OF TRUSTEES

KEY TAKEAWAYS

There are three learnings that are important for economic development organizations:

1. Know your **emerging industry landscape** and be prepared to respond when opportunities mature
2. Build **trusted relationships across sectors** so you are able to bring different interests together and get alignment on strategic opportunities
3. Be open to **engaging nontraditional partners** who bring untapped value into the economic development equation.

For the **company/employer** role, it is necessary to engage in regional partnerships with openness to learn and curiosity. For Joby, this meant an openness to integrate feedback on how to make job descriptions more accessible, adapt the hiring process, or facilitate other internal shifts to better support a more inclusive talent pipeline (see “Employer impacts” section for more detail). Employers should be open to collaborating with external partners to understand the potential workforce and be adaptive in their approach. The James Irvine Foundation supported the AMAP pilot by providing flexible and nimble funding to DART to partner with Joby and cover the salaries of the first 20 participants, which reduced the financial risk for Joby and provided just-in-time support. It also incentivized Joby to pilot an internal apprenticeship training program in a formerly untested labor market, hire talent without direct experience in advanced manufacturing, and further assess what transferable skills would be needed for these new roles. This was a time-sensitive opportunity as the pilot occurred during Joby’s national site selection process, which included consideration of other regions with a better-matched labor market.

“Economic development is inherently entrepreneurial. It is important to invest time and energy in tracking and understanding emerging opportunities. Relationships and trust are a critical foundation to build the awareness and familiarity of people across sectors. Make sure to engage people who haven’t historically had access to the economic development ‘table.’”

JOSH METZ, EXECUTIVE DIRECTOR AND COFOUNDER, MONTEREY BAY DART

KEY TAKEAWAYS

Employer partners must be **willing to pilot a new approach, work with atypical partners, and be open to feedback from community-centric** partners while also meeting business needs. This model offers a way to think about workforce needs and desired aptitudes in a more adaptive way, particularly in the context of emerging new technologies. **Financial incentives** play a significant role in facilitating internal buy-in and providing resources to ensure the success of earn-and-learn training programs. In this case, philanthropy was the source of fast, flexible funding that accelerated program implementation, but **public funding can play a similar role** in initiating, expanding, or sustaining such efforts. However, it depends on where a company is in its overall trajectory and whether that matches the funding restrictions and administrative infrastructure a company needs to access the public resources.

AMAP’s success was facilitated by a **strong network of CBOs**, including Mujeres en Acción, Monterey County Black Caucus, Digital NEST, and others who helped identify and prepare AMAP participants at different stages of the program. With support from the James Irvine Foundation, the Community Foundation for Monterey County convened Salinas-area CBOs. Earlier that year, it had launched the Salinas Inclusive Economic Development Initiative (SIEDI)¹², and CBOs had begun to build relationships across organizations, align on shared goals, and build their capacity as collaborators in and influencers of inclusive economic development. Hartnell College and other local agencies served as advisors on workforce

development and inclusive economic development. The CBO partners received unrestricted grant funding and were engaged in training and mentorship activities to build skills in adaptive leadership and deepen understanding of inclusive economic development to prepare to engage in cross-sector conversations. This effort strengthened the mutual understanding of each organization's value-add, trust between organizations, and alignment on their messaging as economic development players.

Positioning CBOs in this way was a new development in the region, and allowed them to leverage their deep relationships and trust within their communities to facilitate access to new high-quality jobs in the region. They are already experts at supporting their communities to address barriers and facilitate access to opportunities, and the AMAP partnership allowed CBOs to engage in a cross-sector collaborative effort to retain a local employer and grow an accessible pathway to a new kind of opportunity.

“Hartnell College’s involvement in the Advanced Manufacturing Apprenticeship Program (AMAP) and its collaboration with the Salinas Inclusive Economic Development Initiative (SIEDI) showcase a collective impact response to emerging industry needs and regional workforce development. By intentionally engaging with community-based organizations, Hartnell College has helped develop pathways that align with both economic and educational community goals, enhancing economic inclusion and supporting a diversified, innovative regional economy.

This approach serves as a model, inspiring hopes that other community colleges and large workforce systems will engage in similarly innovative and inclusive strategies. This initiative underscores the potential for industry partners, educational institutions, philanthropic partners, government leaders, and community-based organizations to lead transformative impacts, paving the way for a comprehensive and adaptive workforce system that benefits all community members.”

JACKIE CRUZ, VICE PRESIDENT OF ADVANCEMENT AT HARTNELL COLLEGE AND EXECUTIVE DIRECTOR FOR HARTNELL COLLEGE FOUNDATION

KEY TAKEAWAYS

Though philanthropic or public support for this enhanced capacity building and convening may not be available in every case, **it is critical to resource CBOs so they can participate as active stakeholders in inclusive economic development.** Resourcing CBOs opens up their ability to collaborate with each other as well as the surrounding economic development systems, the workforce ecosystem, and the private sector. It is also important to ensure that there is representation across key demographic segments of the community, and that collaboration between CBOs is facilitated in a way that builds trust and encourages stakeholders to name challenges they are facing directly.

“We need to make different relationships in order to change things. If we keep operating the same, nothing will change. That means creating other relationships we might not naturally think of. Finding mutual interests to bring us together and advance both of our agendas.”

MARIA ELENA MANZO, DIRECTOR, MUJERES EN ACCIÓN

Key Players

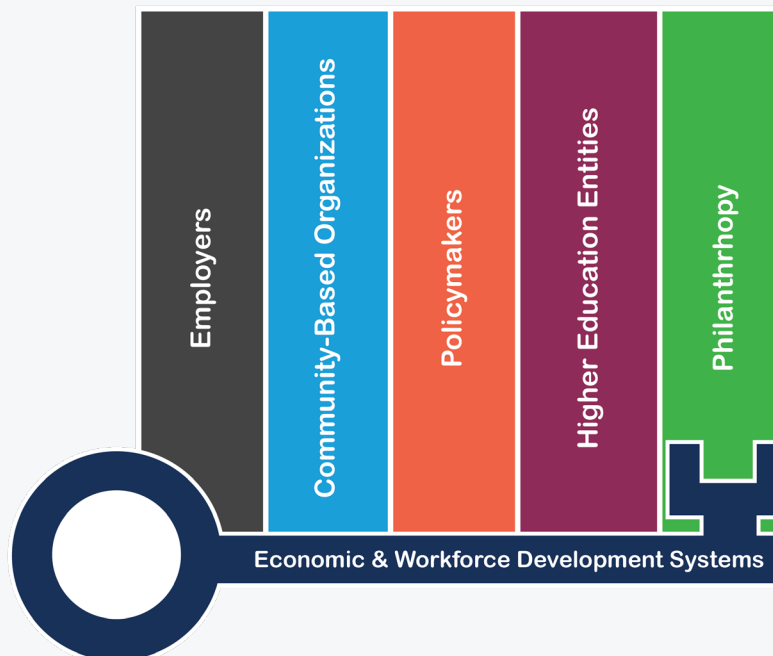
AMAP’s early success is a result of cross-sector collaboration in which each stakeholder is bringing their complementary strengths and aligned goals together to increase the number of good quality jobs in the region and improve access to those jobs through paid earn-and-learn career pathways. Though these roles may be played by different types of organizations in your region, articulating the kinds of contributions each made in AMAP can help you envision your local equivalent.

Employer:

Joby Aviation: A California-based transportation company developing an all-electric vertical take-off and landing air taxi, which it intends to operate as part of a fast, quiet, and convenient service in cities around the world.

Joby was transitioning from early-stage R&D to the buildout of a new aircraft production facility and needed hundreds of advanced manufacturing workers in a region without an existing manufacturing workforce.

**FIGURE ONE:
ADVANCED MANUFACTURING APPRENTICESHIP
PROGRAM SYSTEM KEY PLAYERS**



“Having philanthropic funding [through partnership with DART] gave us more space to be intentional about how we hire and investigate why we do things the way we do. Public funding [to pilot new approaches] can be cumbersome to get and often disjointed from what businesses want and need.”

PETER CHURCH, AVIATION EDUCATION PROGRAM MANAGER, JOBY AVIATION

Economic Development Organization:

Monterey Bay DART: An economic development initiative focused on drone, automation, and robotics technology that brings together industry, government, academia, and practitioners in these industry clusters and provides a strategic regional coordination and advancement forum. DART brings industry expertise to cultivate a high-tech sector and trusting relationships with employers, nonprofits, and other institutions.

Philanthropy:

The **James Irvine Foundation:** A private foundation with the mission of ensuring all low-income workers in California have the power to advance economically. The Priority Communities Initiative aims to build the capacity of communities to engage in inclusive economic development in inland and central California. As one part of a multipronged ecosystem investments strategy to increase the number of good quality jobs, it resourced a local intermediary and convener to support CBOs to build their capacity and coordinate on addressing challenges to economic mobility and funded the initial AMAP pilot for 20 participants.

Community-based Organizations:

- **Mujeres en Acción:** A peer-to-peer support and leadership development program to increase women’s economic self-sufficiency. This group supported recruitment for AMAP and provided feedback to Joby on how to make the application, training, and overall opportunity more accessible for the local Latino community and women. Of the 200 applications to the first Joby/DART cohort, at least half of the referrals were from Mujeres en Accion’s members.
- **Monterey County Black Caucus:** A leadership development and advocacy group that promotes economic development and racial equity for Monterey County’s Black community. They supported recruitment for AMAP; identified skills, aptitudes, and barriers impacting access; and prepared Black community members for career opportunities.
- **Salinas Inclusive Economic Development Initiative (SIEDI):** A collective of nine Salinas-area CBOs with a shared commitment to building an inclusive and equitable economy. This was the space in which CBOs built their capacity and coordinated on their contributions to inclusive economic development. Multiple SIEDI organizations engaged with Joby to assist in mapping aptitudes for the roles to the local workforce to make the application and job descriptions more accessible, and they recruited applicants.

Workforce Development and Higher Education:

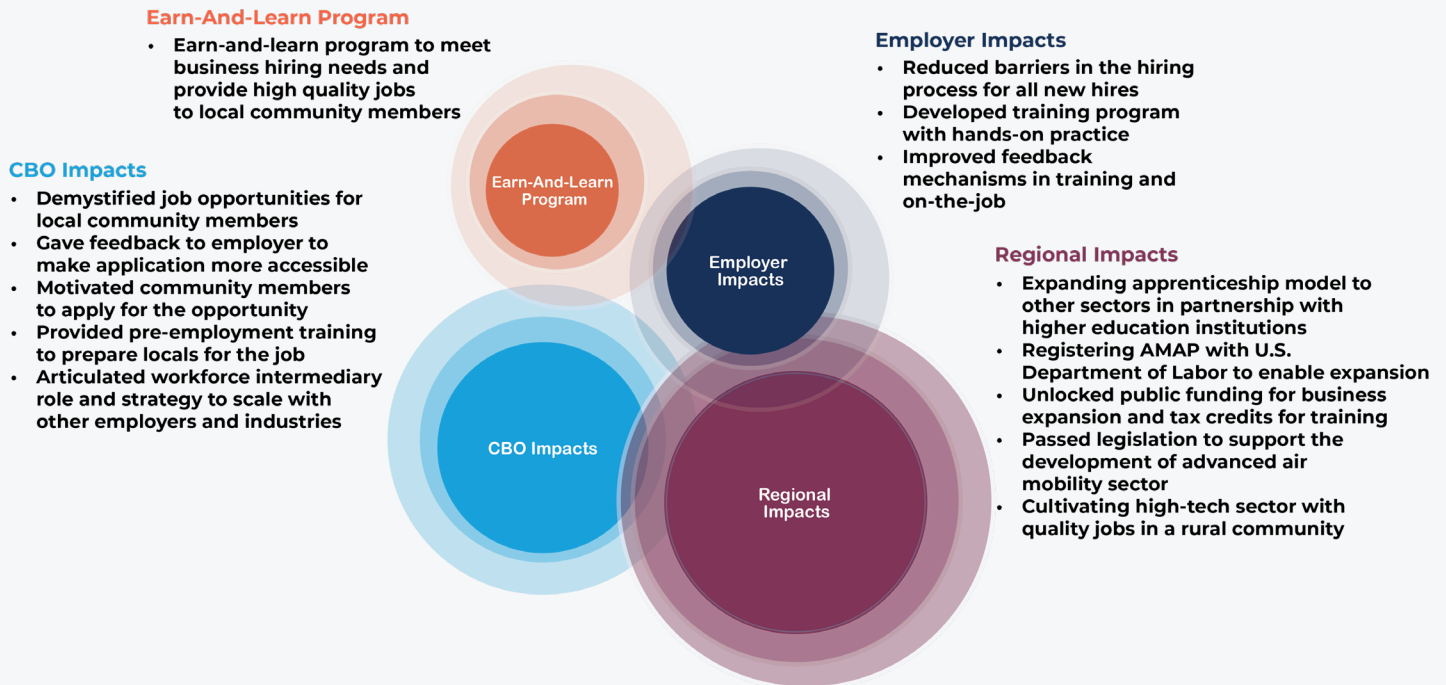
- **Digital NEST:** A nonprofit providing training, professional skill development, mentorship, and technology learning centers for Latino youth. Their award-winning career readiness curriculum and skill development work prepares talent for job opportunities.
- **Hartnell College:** A public community college in Salinas that is a designated Hispanic serving institution (HSI). Hartnell initially was involved for AMAP recruitment, and have since developed an alternative part-time employment pathway with Joby that is more accessible for their full-time students.
- **South Bay Workforce Investment Board:** A statewide, public workforce development Board that provides apprenticeship-related funding and support. SBWIB registered the aerospace systems assembler apprenticeship with the U.S. Department of Labor. Joby is exploring aligning its advanced manufacturing apprenticeship with the registered aerospace systems assembler apprenticeship.
- **Monterey County Workforce Development Board:** A regional, public workforce development entity. This board is partnering with Joby on their broader workforce development strategy, including training reimbursement programs and career opportunities for out-of-school youth.

Note: In this case, local higher education institutions did not have the existing infrastructure and curriculum to immediately provide a short-course (non-college credit) training program for this specific opportunity. In other regions or industries, higher education institutions could have existing infrastructure to tailor workforce education programs to the employer's needs instead of building it within the company. In the Monterey Bay region, several of the above organizations are continuing to partner with higher-education institutions to deepen their role and capacity in this effort.

Impacts and Ripple Effects

At its core, AMAP is designed to create two direct and complementary impacts: first, it allows Joby to find and train the local talent it needs to continue expanding its business in the Monterey Bay region; and second, local residents can access a paid earn-and-learn pathway that reduces barriers to accessing good quality jobs, ultimately increasing upward mobility. Joby matched the initial 20 positions 2:1 with an additional 40 apprentices, leading to 60 total apprentices who participated in the pilot. Of the first cohort, 90% had less education than a bachelor's degree, and more than 90% of these apprentices have transitioned into permanent positions at Joby as technicians, inspectors, and supervisors.¹³ Participants in the AMAP pilot's first cohort saw a 22% increase in median wage one year from their start date, and 25% of apprentices have completed additional certificates beyond the Advanced Manufacturing Technician certificate that is core to AMAP. This program supports Joby in its projected 690-worker growth trajectory in the region, and was key to help the company secure a \$9.8M California Competes grant from the state.¹⁴

AMAP SYSTEM RIPPLE EFFECTS



“The AMAP pilot and strategy is one part of a multipronged, equity-centered approach to diversify the industry base of the regional economy, increase the number of quality jobs and access to those jobs through earn-and-learn pathways, address barriers to economic opportunity for different populations, and center the role of communities on the margins in reshaping the regional economy.”

LIZ POSEY, SENIOR PROGRAM OFFICER, JAMES IRVINE FOUNDATION

However, what is most notable about this collaborative effort is the way this apprenticeship pilot in a new emerging sector catalyzed changes in **Joby**, throughout the **community**, and all the way up to the **regional ecosystem and policy sphere**.

Employer Impacts

Through its experience with AMAP, **Joby** has identified shifts in policy and practice in hiring, training, onboarding, and advancement that support the success of not only AMAP participants but all Joby employees.

Hiring:

- As the company shifted its talent pipeline to more nontraditional hires, or people without direct experience in advanced manufacturing, they broadened their understanding of **what aptitude looks like in a potential new hire**. For example, they worked with CBOs and early AMAP participants to identify other work experiences and hobbies that cultivate relevant skills for advanced manufacturing

roles, such as construction, building cars, sewing, or hair-dressing. As a result, they identified a wide range of relevant skills and experiences that set apprentices up for success, and updated their recruitment materials and job postings to reflect this. For example, they shifted from specific advanced manufacturing-related job titles such as “robot operator” or “carbon fiber layup technician” to be more inclusive of the adjacent, technician, and maker-oriented skills and experiences.

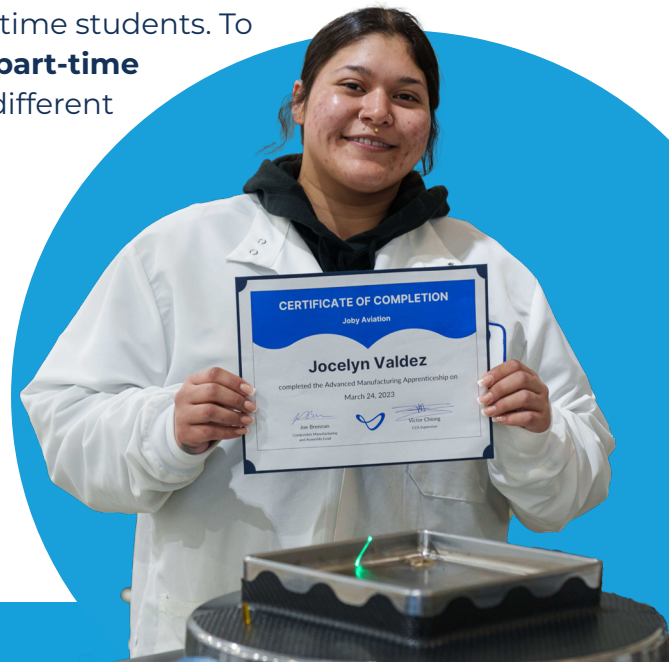
“As we began to establish our manufacturing workforce, we identified one major gap: very few Salinas Valley locals have manufacturing experience. We needed to prove that we could teach the technical skills to workers without direct experience in this field. After great success with the first pilot cohort, we knew we wanted to expand the apprenticeship program.”

CODY CLEVERLY, WORKFORCE DEVELOPMENT LEAD, JOBY AVIATION

- These learnings translated to the hiring process as well. Initially, recruiters sent Google Calendar interview invitations, but when **they realized candidates weren’t regularly accessing email, they implemented SMS text invitations** and were more clear about the virtual interview format.
- Joby initially hired apprentices as temporary workers through a staffing agency, but soon transitioned to **hiring apprentices as full-time employees on their first day**. This shift meant that Joby began fully investing in apprentices from the first day of training by providing immediate access to benefits and company equity. As official employees, apprentices had more “skin in the game,” and their official employment status encouraged other internal stakeholders to provide even more support if any challenges arose with their training or performance.
- AMAP participants receive the title of “Apprentice.” This title signals a **higher-touch, structured, and supportive training experience** and gives apprentices more clarity as to what they can expect from the employer.
- In partnering with Hartnell College, Joby identified that the full-time structure of AMAP was inaccessible to many full-time students. To create an alternative pathway, they developed a **part-time internship program** to give Hartnell students a different pathway into a career at Joby.

Onboarding and Training:

- Prior to AMAP, training occurred almost exclusively on the job and was often sporadic and loosely structured, resulting in longer training timelines. Hiring cohorts of apprentices without prior manufacturing experience created an opportunity to provide **classroom and hands-on training** to new recruits before



they reported to the manufacturing floor. Instruction was provided by Joby staff, who were scheduled in a way to minimize disruptions on the production line.

- The structured training program included **evaluations** throughout so that any challenges or gaps were identified in real time and could be addressed to support a successful completion. This approach provided a framework that enabled supervisors to provide individualized coaching.
- Joby added a **second day of onboarding** for manufacturing employees that covered an introduction to Joby's different manufacturing processes, a tour of the company's facilities, and a discussion of how those functions fit into Joby's business more broadly. This connection to company purpose gives employees a more meaningful work experience and a clearer understanding of their role.

“For supervisors and managers, understand that it took a lot for someone to get to the point of applying for a job like this. Be encouraging, support them, and remember what helped you when you were in their shoes.”

ROSALYN GREEN, FOUNDER, MONTEREY COUNTY BLACK CAUCUS AND CHAIR OF THE MONTEREY PENINSULA COMMUNITY COLLEGE DISTRICT BOARD OF TRUSTEES

Retention:

- Supervisors started having **regular 1:1 conversations** with their apprentices in order to close feedback gaps, improve communication, and build stronger relationships with their teams.
- Additional **feedback and support channels** were added to ensure apprentices had support from someone other than their direct supervisor, such as Joby's Workforce Development team.
- Joby modified how it **communicated** internally on topics like benefits. Recognizing that manufacturing employees don't check their email and instant messages as often as desk workers, they used lunch-and-learn sessions and posted flyers in the breakroom to share benefit information in an accessible way.

Advancement:

- Joby provided apprentices with more clarity on **career pathways and upward mobility in the company**, including navigation, by more intentionally sharing published job-level descriptions and performance expectations.
- They moved away from rigid, tenure-based advancement to a **more flexible approach** in which people can move laterally across functions or upward based on aptitude, performance, and prior experience.

Community-Based Organization Impacts

For CBOs, participation in AMAP helped them articulate their valuable contributions to inclusive economic development. Economic development conversations and

decision-making structures have historically excluded CBOs, but the work of SIEDI and AMAP have helped shift that dynamic with CBOs coming to the convening table as partners, contributors, and decision makers.

Engaging with AMAP also supported CBOs to better understand industry needs and approaches to recruitment and training in order to better position themselves as partners to employers. CBOs shared important learnings about this role that unlocked opportunity for community members:

- **Demystify the job:** When community members first heard about the jobs at Joby, there was both a lack of understanding and an assumption that they wouldn't be a good fit for the role. Joby led tours with CBOs and higher education institutions to show the facility and the jobs in action, so they could then help community members understand their potential fit.
- **Support community talent to apply:** CBOs worked with Joby to understand what aptitude for the role looks like, and then helped potential applicants position their skills, hobbies, and job experiences in a way that was relevant to the Joby opportunity. CBOs and community organizers also helped potential applicants address barriers to employment. Hosting information sessions with diverse Joby employees, such as those from the Latino or LGBTQIA communities, helped candidates to visualize someone like themselves in the role.

“In addition to technical skills, we teach professional skills and career navigation skills to help our people navigate what is often a biased system. That social capital piece is so important.”

JACOB MARTINEZ, FOUNDER AND CEO, DIGITAL NEST

- **Provide pre-employment training:** CBOs (e.g., Mujeres en Acción, Monterey County Black Caucus) and workforce organizations (e.g., Digital NEST) supported candidates with the application process, including resumes, and some offered soft-skill training, career navigation training, and digital literacy support so community members could feel well positioned and ready for the opportunity.

In a diverse region like Monterey Bay, it was important for the business sector to recognize, and for CBOs to advocate for, **representation that reflects those living in the region**. This means acknowledging that one CBO does not speak for the full community, and each demographic group faces unique recruitment needs and barriers that require nuanced approaches. Barriers to accessing pathways to quality jobs were surfaced by engaging CBOs that represented different community needs, which was critical to the success of this effort.

Regional Ecosystem Impacts

DART, Hartnell College, and others have been looking at how to translate the success of AMAP into other high-tech growth industries in the region, which demonstrates the applicability of this model. Agriculture technology (AgTech) builds on the region's existing strengths and offers the opportunity for high-quality jobs, so partners in the region are looking for ways to **leverage shared workforce training**

across industries and expand earn-and-learn pathways to AgTech and other industries. This will expand the training capacity of the region for additional industries, companies, and types of roles and thus provide companies with a steady pipeline of qualified talent. Hartnell has also identified a need for non-credit-bearing credential programs for incumbent workers — such capacity could be used to partner with employers to host training.

At the policy level, AMAP unlocked public funding and new legislation to support inclusive economic development and the cultivation of high-tech sectors for rural communities that have advanced manufacturing needs as a strategy to increase quality job creation. As mentioned above, the early success of AMAP and engagement with local CBOs supported Joby’s application for a California Competes grant, in which they were awarded \$9.8M for statewide expansion¹⁵ of their operations and manufacturing.

“When we invest in our people and our community, and that investment gives them skills or certifications, that’s a good investment for our economy. When we build up our workforce and infrastructure, businesses will want to operate here.”

**JOSH METZ, EXECUTIVE DIRECTOR AND COFOUNDER,
MONTEREY BAY DART**

After becoming engaged with the regional and state-level effort to secure Joby’s manufacturing expansion in California led by Monterey Bay DART, and then being invited by SIEDI to learn about their collective contribution to the success of AMAP and the positive impacts on the lives of some of the apprentices recruited from Mujeres en Acción’s network, locally elected Senator Anna Caballero introduced SB800, which created an Advanced Air Mobility, Zero-Emission, and Electrification Aviation Advisory Panel with a three-year charge to map out air mobility infrastructure. **Getting creative with positioning was key to passing this legislation:** Joby’s electric air mobility efforts align with state climate goals and zero emissions targets, and AMAP meets the criteria for local hire statutes within those programs. **By positioning AMAP as a solution to the state’s climate goals, emissions targets, and local hire priorities, they were able to secure more public support.** Additionally, Sen. Caballero and her staff worked to expand an existing Electric Vehicle manufacturing tax credit to cover advanced air mobility (such as Joby’s electric aircraft), specifically for companies that are operating in underserved communities and hiring the local population.

AMAP began as an unregistered apprenticeship¹⁶, which means it was not registered with the federal Department of Labor (DOL) or the state apprenticeship agency. This flexibility was critical to getting AMAP off the ground with fewer bureaucratic hurdles, and after the initial success of the pilot, Joby plans to align its apprenticeship with an existing DOL-registered apprenticeship. This shows how flexible support for a broad range of earn-and-learn programs can be a **pipeline strategy for expanding registered apprenticeships** over time. Building out the business case for earn-and-learn programs and demonstrating the return on investment to companies will help build buy-in for such approaches.

Public workforce systems could play a greater role in these partnerships, but bureaucratic hurdles and funding complexities limit collaboration. Policy and practice changes, as well as flexibility on the part of both government and philanthropy, could unlock more support for companies with emerging technologies to pilot new training approaches. With more successful demonstrations of earn-and-learn pathways for nontraditional talent that is supported by public-private partnerships, more companies would be encouraged and willing to fund these pilot efforts themselves.

As stakeholders reflected on the opportunity AMAP holds for the Monterey Bay region, they emphasized that getting the local workforce into accessible high-quality career pathways is a win for all. These efforts should focus on incentivizing industry development specifically in communities where good jobs are needed, such as rural communities with low economic mobility and educational attainment rates and urban communities with a dearth of accessible earn-and-learn pathways that provide upward mobility. By improving the well-being and economic mobility of more workers, they anticipate improved community outcomes, from schools to safety, eventually contributing to a better quality of life. This impact creates a virtuous cycle, as higher quality of life drives increased public and private investment and expands the local and regional economy.

Key Takeaways

AMAP offers a model for community-informed workforce development in high-tech industries as one component of a broader effort to drive inclusive economic development. By engaging across sectors to improve the hiring process with community input, publicizing the opportunity in an accessible way, and uplifting this industry for regional and statewide stakeholders, this project has achieved more than the initial pilot to train 20 apprentices. Philanthropy can play an important role in supporting capacity building for CBOs and funding to pilot similar training efforts. This collaborative approach to inclusive economic development offers a model for how to position the local workforce for quality, upwardly mobile careers in high-tech growth industries that are good for the economy and good for the environment.

This model can be replicated with three core components:

- **Employer partners** who need skilled talent, are willing to partner, and are open to feedback and using an adaptive approach to meet the needs of the local prospective workforce inclusively and efficiently
- **A suite of funded CBOs and workforce stakeholders** who are deeply connected to the diverse demographic groups that reflect the local community, can help translate the job opportunity and make it accessible, and are willing to meet businesses halfway for the good of the region
- **An economic development organization** with industry expertise who can bridge the gap between sectors as a facilitator, connector, and translator

Summary of Key Impacts

Employers

- Accessed an untapped talent pipeline to meet business needs.
- Developed a highly effective and translatable apprenticeship model.
- Shifted hiring, onboarding, and advancement practices to be more inclusive for local talent.
- Demonstrated high retention and advancement outcomes for AMAP participants.

Community

- Supported community members to apply for and achieve careers that previously felt unattainable and inaccessible.
- Shaped employer hiring and training practices based on community input.
- Codified the role of CBOs in talent pipeline development and the value to employers.

Regional Ecosystem

- Identified opportunities for new learn-and-learn programs and apprenticeships in other sectors to expand access to good jobs.
- Secured state funding for high-tech business expansion.
- Passed state policy to support the Advanced Air Mobility Industry in California.
- Demonstrated unregistered apprenticeships as a pipeline approach to building more registered apprenticeships, thus increasing both the number of good jobs providing upward mobility and access to those jobs through earn-and-learn pathways.
- Developed an emergent model for leveraging workforce development as a key component of inclusive economic development that's good for business and for the community, improving quality of life.

We encourage other regions that want to attract emerging industries with quality jobs to consider this approach as one component of their inclusive economic development strategy. Innovative cross-sector workforce development programs can be critical elements of successful business retention and expansion initiatives. For industries that are considering expanding to rural regions but feeling limited by the lack of an existing trained workforce, this approach shows that cross-sector partnerships are an effective way to upskill, hire, and retain local workers in any region lacking good quality, accessible earn-and-learn pathways. See our additional guides for employers, CBOs, and workforce and economic development entities for tactical advice and lessons learned.

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