

**Fresno-Merced  
Future of Food (F3) Innovation**

**Submitted by Central Valley Community Foundation | March 15, 2022**

  
**Central Valley  
COMMUNITY FOUNDATION**  
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**[Link to Video](#)**

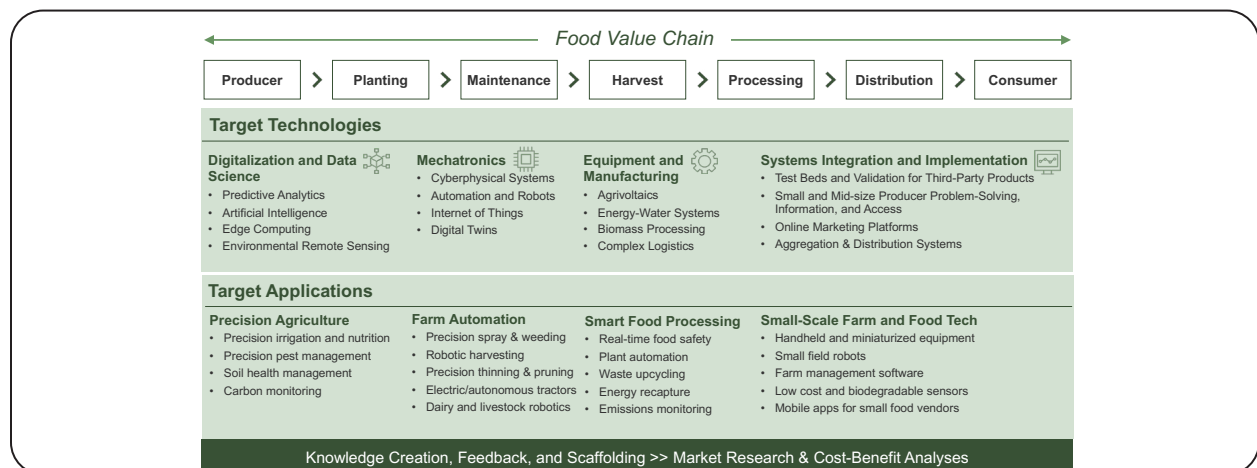
## SECTION 1: Synopsis of F3’s Vision for Regional Economic Development

**Our Vision** – California’s Central Valley is a food producing powerhouse with over 13,650 farming enterprises producing 350 commodities annually worth \$70B, including 60% of the nation’s fruits and nuts and 30% of its vegetables. Despite this agricultural bounty, 45% of the five-county region’s workers struggle to put food on their own tables. The status quo is untenable with the region’s children 68% more likely to live in poverty than in the rest of the nation<sup>1</sup>, unemployment over twice the national average<sup>2</sup>, residents exposed to the worst air quality in the nation<sup>3</sup>, and communities living with contaminated water<sup>4</sup> from the legacy of traditional farming practices.<sup>5</sup> The region remains among the most persistently poor and unequal in the U.S. because its agriculture commodity-driven economy cannot create enough quality jobs that enable residents to make ends meet. Furthermore, while it represents 30% of regional employment, agriculture threatens its own future in the Central Valley as a primary contributor to climate change and is at the greatest risk of its impact.

Yet, these challenges are also the opportunity. An adjacent, higher-value “engineering for agriculture” cluster is emerging from the region’s unique concentration of industry supply chain, research expertise, and specialized infrastructure. The region is ideally positioned to develop and commercialize solutions for climate-adaptive food production needed locally and around the world, while creating high-quality jobs across skill levels for Central Valley residents. Fresno DRIVE’s Fresno-Merced Future of Food (F3) Innovation Initiative organizes the region’s assets into an ecosystem that unlocks a world class “**Climate-Smart Agrifood Technology and Engineering Cluster**” based on capabilities in digitalization and data science, mechatronics, equipment, and systems testing and integration for agrifood applications (see Figure 1).

The F3 portfolio drives both economic growth and equity – spurring inclusive innovation and commercialization with supports that proactively engage small farmers and entrepreneurs alongside multinational companies; building a seamless talent development pipeline; and catalyzing local market growth of the small-scale farm and food industry. **As a result, over four years F3 will increase regional GDP from 2.1% to 3.0% annually; attract \$250M in private investment; and create/fill more than 10,000 quality jobs that pay 60% more than current, low-skilled jobs.** In addressing economic, agricultural, and climate challenges, F3 is transformational for resiliency and competitiveness of the region and nation. While the Central Valley has been investment-worthy for generations, it is now investment-ready for the Future of Food.

**Figure 1: Cluster Target Technologies & Applications**



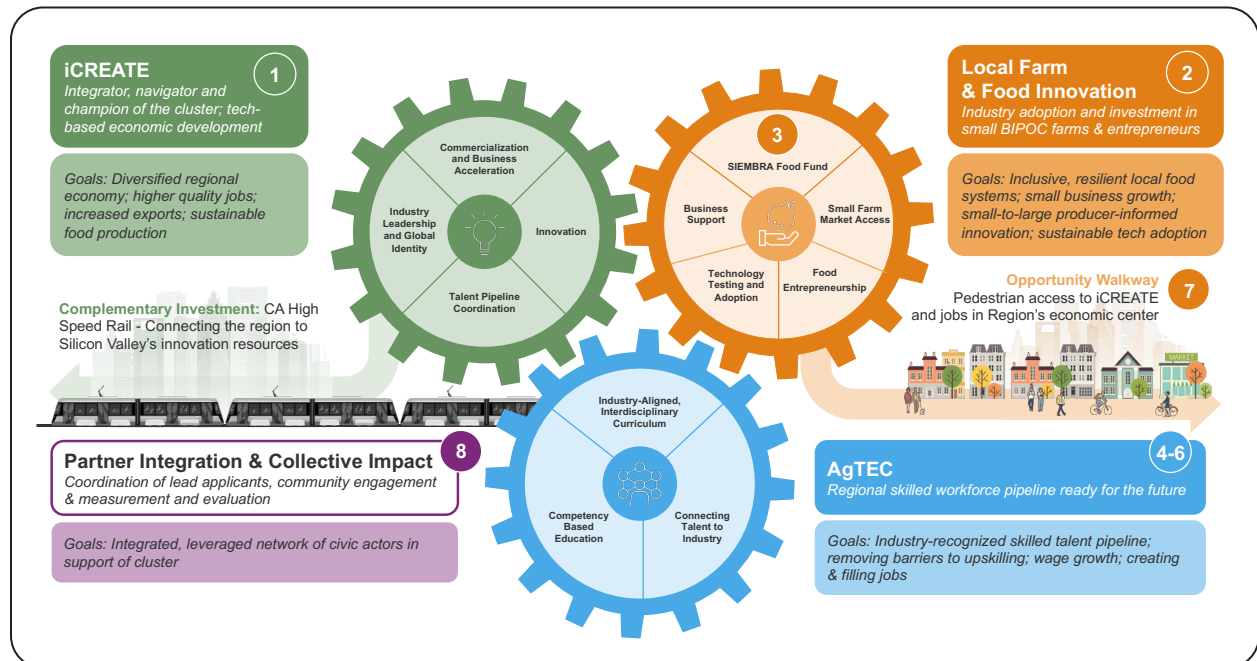
**Coalition Members:** F3 brings all sectors together in support of the cluster with roles defined precisely in F3’s component applications and summarized below in Figure 2.

**Figure 2: F3 Coalition Members and Partners**












Partner Category	Role	Participants
<b>Industry Partners</b>	Volunteer leadership of iCREATE, AgTEC, and Small Farm Tech Innovation Alliance	Agricultural associations, co-ops, and large employers representing 15,000 farm and food enterprises with more than 430,000 employees – Agriland, Almond Board, Blue Diamond Growers, California Citrus Mutual, California Fresh Fruit Association, California League of Food Processors, HMC Company, Western Ag Processors, Western Growers Association, Wonderful Company
<b>Anchor Institutions</b>	Founding iCREATE board members (501c3)	California Department of Food and Agriculture, Governor’s Office of Business & Economic Development, California State University-Fresno, Central Valley Community Foundation, UC Ag & Natural Resources, University of California, Merced
<b>Component Project Lead Applicants</b>	iCREATE Lead	University of California, Merced (UCM)
	AgTEC Lead	Merced College
	Local Farm and Food Innovation Lead	University of California Ag and Natural Resources (UC ANR)
	AgTEC Construction – Merced College Lead	Merced College
	AgTEC – Reedley Construction Lead	Reedley College
	Opportunity Walkway Lead	City of Fresno
	SIEMBRA Fund Lead	Fresno Area Hispanic Foundation
	Partner Integration & Collective Impact Lead	Central Valley Community Foundation (CVCF)
<b>Implementation Partners</b>	iCREATE	Fresno State; UC ANR; UCM
	AgTEC	Clovis Community College, College of the Sequoias, Fresno CC, Madera CC, Merced College, Reedley College, West Hills College – Coalinga, West Hills College – Lemoore, California Farmworker Foundation
	Local Farm and Food Innovation	Community Alliance with Family Farmers, Cultiva La Salud, Fresno Metro Ministry, UC ANR

**Overall Success of the Regional Cluster and Component Projects** — Figures 3 and 4 describe the F3 projects and show alignment to the overall success of the cluster and the regional CEDS.

**Figure 3: F3 Component Projects and the Agrifood Technology and Engineering Cluster**



**Figure 4: Component Project Descriptions and Support of Regional CEDS**

Component Project	Project Descriptions	Alignment to CEDS goals
 <b>1 iCREATE</b>	<ul style="list-style-type: none"> <li>Agrifood Tech and Engineering Cluster hub with 4 pillars (Industry Leadership; Innovation; Commercialization; Talent Pipeline Coordination) that <b>catalyze innovation, 3,500 jobs and &gt;\$250M in private investment</b></li> </ul>	 <p><b>Creation of quality jobs:</b> innovations and industry-aligned workforce driving increased productivity, income-levels, and employment growth</p>  <p><b>Development of a skilled workforce:</b> interdisciplinary, industry-aligned and recognized training upsills existing workforce and develops next-gen innovators and agri-food tech workers</p>  <p><b>Enhancement of regional economic development and competitiveness:</b> regional food industry collaboration enabling a diversified resilient economy</p>
 <b>2 Local Farm &amp; Food Innovation</b>	<ul style="list-style-type: none"> <li>Driving inclusive economic growth of small-to-large scale farmers and food entrepreneurs, achieving a <b>40% adoption rate of new economically, environmentally sustainable technologies and key contributor to \$250M in private investment</b></li> </ul>	
 <b>3 SIEMBRA Food Fund</b>	<ul style="list-style-type: none"> <li><b>\$4.5M revolving loan fund</b> to expand BIPOC-owned farms and food businesses</li> </ul>	
 <b>4 Ag-TEC Workforce Initiative</b>	<ul style="list-style-type: none"> <li>Regional workforce collaborative of 8 community colleges building industry-aligned agrifood tech pathways for <b>&gt;8,000 workers, including 4,000 incumbent workers, increasing salaries by 60%</b></li> </ul>	
 <b>5 Reedley Innovation Center</b>	<ul style="list-style-type: none"> <li><b>9,000 SF</b> for industry, tech, and workers to test and demonstrate technologies focused on grapes, citrus, and stone fruit</li> </ul>	
 <b>6 Merced Innovation Center</b>	<ul style="list-style-type: none"> <li><b>15,000 SF</b> for industry, tech, and workers to test and demonstrate food processing systems</li> </ul>	
 <b>7 Opportunity Walkway</b>	<ul style="list-style-type: none"> <li><b>Public walkway</b> connecting disinvested neighborhoods to <b>jobs &amp; opportunity</b> in Downtown Fresno, the region's economic center</li> </ul>	
 <b>8 Partner Integration</b>	<ul style="list-style-type: none"> <li>Collective impact of F3 investments through <b>integration, community engagement, and shared measurement and evaluation</b></li> </ul>	

**Complementary Initiatives** — F3 is a central component of a broader, inclusive economic development strategy for investments being made in the Fresno-Merced region. Major complementary initiatives include:

- Financial Support from the State of California and Renovation of iCREATE Headquarters** – The State of California has been the lead investor in F3 committing \$32M in seed funding. As documented across the F3 component applications, \$14.25M of the State’s initial investment is being provided as a direct match to the BBBRC proposals. The remaining funding will enable the renovation of a 65,000 SF historic building in Downtown Fresno near High Speed Rail to serve as the headquarters for iCREATE.
- Fresno DRIVE (Developing the Region’s Inclusive and Vibrant Economy) Initiative:** F3 is one of 14 initiatives that comprises DRIVE’s 10-year, \$4.2B community investment plan, which has attracted nearly \$100M in philanthropic and public capital to support small businesses, civic infrastructure, the K-16 pipeline, and early childhood initiatives.
- California’s Community Economic Resilience Fund (CERF):** Fresno DRIVE’s equity-centered model of inclusive economic development inspired the State of California to create the \$600M CERF for regional economic development plans like DRIVE. F3 projects may be eligible for complementary investments from CERF.
- California High Speed Rail (HSR):** The \$6.8B Central Valley segment of HSR will connect Fresno and Merced in less than 30 minutes by 2029 and the Central Valley to San Jose in less than an hour by 2031 providing Central Valley innovators access to the Silicon Valley.
- Community College Investment:** Over \$40M has been invested in the last 24 months in the agrifood tech-aligned facilities and equipment at the region’s community colleges.
- State Funding for Climate-Smart Agrifood Tech:** \$1.1B of state funding for climate-smart agrifood has been proposed in the FY23 budget, to be approved by June 2022.

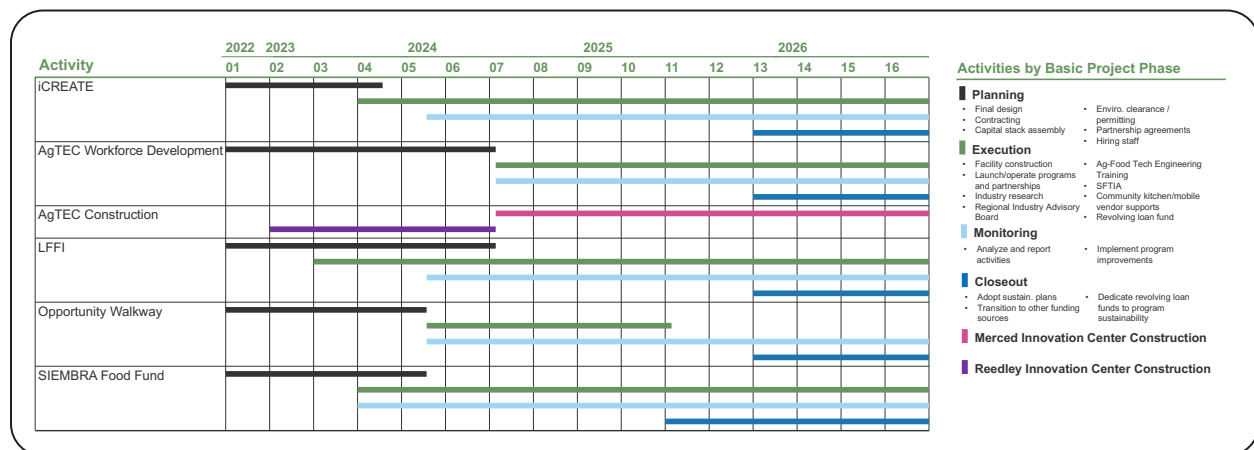


- **Research Funding Awards:** UC Merced, Fresno State, and UC ANR have been awarded \$160M in collective funding for agrifood tech research over the last two years.
- **EDA Awards for Related Projects:** Merced College, Fresno City College, and the Fresno Area Hispanic Foundation are being awarded \$6M in EDA grants to support F3-aligned programs. The VINE Network was awarded \$2.8M to UC ANR by EDA.
- **Philanthropic Support:** The James Irvine Foundation has made 3 grants in the last 3 months in support of grassroots leadership in Fresno DRIVE and other economic justice initiatives. This support includes engaging USC’s Equity Research Institute to assist F3 with data and analysis of opportunities and barriers in the agrifood tech industry, and to build collective impact infrastructure that can be leveraged by F3.

**Specific Metrics of Success** — In total, the F3 portfolio is expected to attract \$250M in private investment, create/fill 10,000 jobs and contribute ~\$500M to GDP annually after 4 years with the contribution growing each year thereafter, resulting in an annual increase in regional GDP from ~2.1% (regional 20-year CAGR) to 2.7-3.0% after 4 years and stabilized GDP growth, which has fluctuated heavily due to lack of economic diversification. Job creation will decrease unemployment by 1.2%, resulting in a 6.3% unemployment rate across the 5-county region, where 10- and 20-year average unemployment rates have been 12.2% and 11.5% respectively. Of the jobs created/filled, approximately 7,000 are projected to employ BIPOC community members with average wages that are at least 60% higher than current employment.<sup>6</sup>

**Timeline** — Figure 5 outlines the overall project plan for the next 4 years, including construction of the community college innovation centers and the Opportunity Walkway.

**Figure 5: F3 Implementation Timeline**



## SECTION 2: F3’s Location and Region

F3 will primarily serve California’s 5-county Central Valley region, which includes Fresno (06019), Kings (06031), Madera (06039), Merced (06047), and Tulare (06107) Counties. The 16,000 square mile region is home to over 2M people living in 108 cities, towns, and unincorporated areas. It aligns with EDA’s focus on equitable recovery from the pandemic and persistently impoverished regions. Approximately 70% of Central Valley residents identify as BIPOC. Fresno is the geographic and population center of the region with over 1.02M residents where the economy ranks 268th of 274 large cities nationwide for economic inclusion.<sup>7</sup>

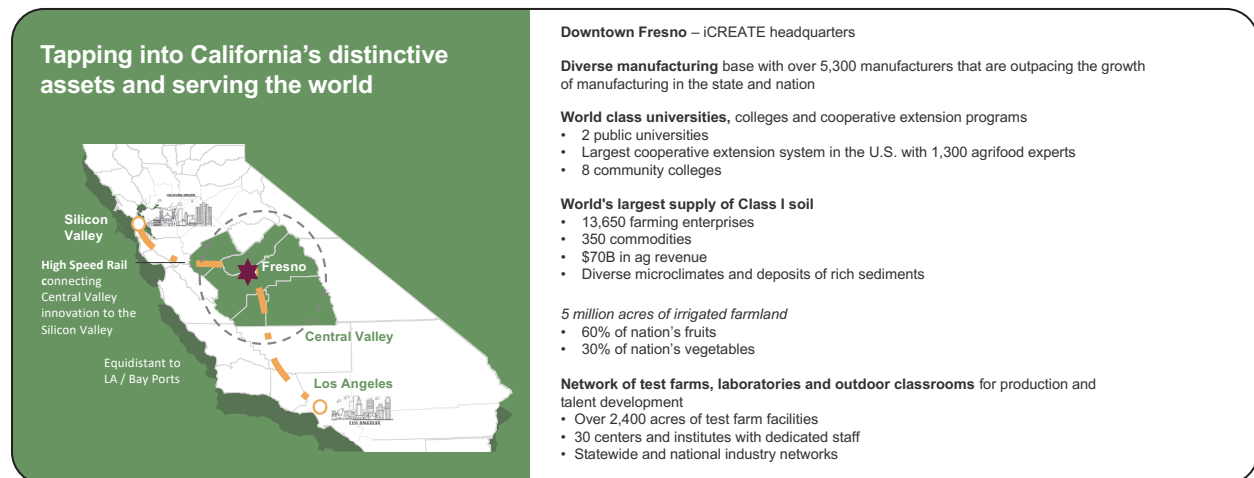


Almost a third of jobs are associated with the food industry, but the region experiences the 3rd worst food hardship in the nation.<sup>8</sup> Target communities and stakeholders include:

- **Farming Enterprises Across the Region:** There are 13,650 farms across five counties that will benefit from the innovations and financial resources coming to the region.<sup>9</sup>
- **BIPOC and Underserved Farmers:** According to the USDA 2017 census, there are 6,795 BIPOC and underserved farmers in the five-county region.
- **Small-Scale Producers and Mobile Food Vendors:** There are 4,700 small-scale food producers in the region, with 1,600 mobile food vendors in Fresno County alone.
- **Ag Workers Impacted by Automation:** 72% of the roughly 88,000 existing agrifood jobs in the region require no formal education.<sup>10</sup> Workers in these lower skilled jobs are at the greatest risk of automation<sup>11</sup> and are the target for the AgTEC investments.
- **Agrifood Manufacturers:** The approximately 220 agrifood manufacturers<sup>12</sup> in the region are an important part of identifying industry needs for the iCREATE innovation ecosystem.

**Industry & Regional Assets:** Figure 6 showcases the region’s substantial industry assets.

**Figure 6: Central Valley Industry and Regional Assets**



### SECTION 3: Private Sector Participation and Stakeholder Commitments

F3 embeds industry participation in governance and leadership as follows:

- **iCREATE Board of Directors** – In addition to the founding institutions, the iCREATE board will include industry representatives and BIPOC and underserved farmers.
- **Small Farm Tech Innovation Alliance** – Convenes small-scale and BIPOC farmers, tech companies, research & extension professionals, and CBOs to ensure small-scale priorities and needs are embedded into F3 R&D and workforce development activities.
- **AgTEC Talent Task Force** –The AgTEC Workforce Initiative establishes the Talent Task Force, a regional coordinating body comprised of industry associations, employers, and workers to champion and oversee the development of the regional workforce pipeline.

The F3 projects also offer high-quality, high-demand services for industry partners, including the Catalyst R&D Fund for industry-engaged R&D; innovation and commercialization support; promotion of the industry through symposia and international conferences; small business lending; support for market access; and innovative demand-driven workforce training.



**Stakeholder Commitments** – F3 has secured the following commitments from industry partners who collectively employ over 400,000 annually in the five-county agrifood industry:

**Figure 7: Industry Commitments to F3**




Industry Partner	Description	Annual Industry or Firm Hiring Needs	F3 Partnership Commitments	Letter Provided
Agriland	Farming 31,000 acres in 5-county region	800	✔	✔
Almond Board of CA	Association representing 7,000 almond growers	100,000	✔	✔
Blue Diamond Growers	Almond co-op representing 3,000 growers	1,400	✔	✔
California Citrus Mutual	Association representing 2,500 growers	20,000	✔	✔
California Cotton Ginners & Growers	Association representing 1,000 employers	11,000	✔	✔
California Fresh Fruit Association	Association representing 350 employers; 100,000 employees	Approx. 100,000	✔	✔
California League of Food Processors	Association representing hundreds of processors and 200,000 workers	15,000	✔	✔
HMC	Stone fruit grower	500-1,500	✔	✔
Western Growers Association	Association representing 2,000 growers	1,000	✔	✔
Wonderful Company	Grower/Producer – almonds, citrus, pistachios, pomegranates, wine grapes, nursery stock	>1,000	✔	✔

**Philanthropic Commitments** – To date, philanthropic funders have invested nearly \$25M in the Fresno DRIVE Initiative, the original sponsor of F3. They have expressed interest in investing alongside EDA in AgTEC, community engagement, and other aspects of the projects related to economic mobility for low-wage workers in the region.

## SECTION 4: Financial and Operational Sustainability

**Financial Sustainability:** As outlined in each component application, F3’s activities have the potential to become financially and operationally sustainable within 4 years, ensuring BBBRC investments create sustainable change and equitable, long-term prosperity. The Cluster will draw from existing and establish several new funding streams to enable financial sustainability.

**Figure 8: Key Post-Award Funding Streams by F3 Initiative**

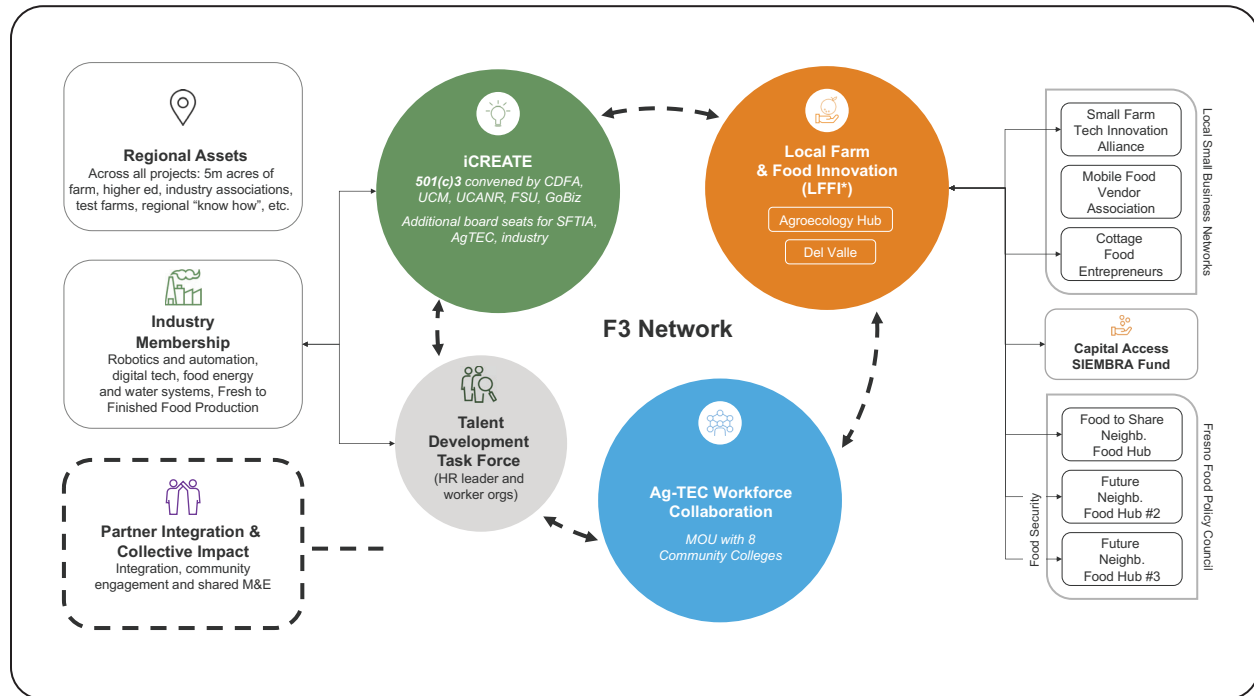
Project	Key Funding Streams
 <b>iCREATE</b>	<ul style="list-style-type: none"> <li>• <b>Membership dues:</b> Low-cost membership fees received from industry partners that join the cluster</li> <li>• <b>Industry funded R&amp;D:</b> Fees and charges for industry-engaged research</li> <li>• <b>Grants and contracts:</b> Obtained through public and philanthropic sources</li> <li>• <b>Other funding opportunities:</b> Events, conferences, direct solicitation of donations</li> </ul>
 <b>Local Farm and Food Innovation</b>	<ul style="list-style-type: none"> <li>• <b>Revenue from operations:</b> Revenue from operations of De Valle Food Hub</li> <li>• <b>Industry funded R&amp;D:</b> Sponsored research and fee-based projects and services</li> <li>• <b>Industry sponsorships:</b> Capital and resources from iCREATE commercialization activities</li> <li>• <b>Grants and contracts:</b> Obtained through public and philanthropic sources</li> </ul>
 <b>Ag-TEC Workforce Initiative</b>	<ul style="list-style-type: none"> <li>• <b>State apportionment:</b> State funding based on enrollment in certificates and degree programs</li> <li>• <b>District funding:</b> Funding from the district for OPEX (e.g., innovation center staffing costs)</li> <li>• <b>Innovation center fees:</b> Fees to utilize the center’s facilities and resources</li> </ul>

**Operational Sustainability:** While each core project has its own formal and/or collaborative governing body to provide oversight and accountability for outcomes, the F3 project leads and implementing partners are committed to the “Partner Integration and Collective Impact” model,



as depicted in Figure 9. Coordinated by the Central Valley Community Foundation, Partner Integration will ensure coordinated and well-leveraged implementation, deeper community engagement, and joint measurement and evaluation.

**Figure 9: F3 Partner Integration Model**



## SECTION 5: Engagement of Community-Based Organizations (CBOs)

For over twenty years, the Greater Fresno Region has been aggressively pursuing civic renewal and revitalization led by both institutional and grassroots leaders resulting in interconnected networks of CBOs, civic institutions, industry groups, and residents who are deeply committed to and working towards the economic transformation of the region. F3 benefits from the work to date to build the region’s civic capacity for change and has intentionally planned to engage the CBO sector in key ways to ensure resident voices and economic inclusion are embedded in the Cluster’s efforts. Specifically, F3 will engage CBOs as follows:

- **Implementation Partners in F3 Component Applications** – As trusted partners with successful track records in engaging, advocating for, and providing services to F3 target communities, the following CBOs are sub-awardees in F3 component applications:
  - *California Farmworker Foundation (CFF)*: CFF represents 5,000 farm and field workers in California’s Central Valley and Coachella Valley and will help ensure workers are included in designing and implementing the AgTEC workforce initiative.
  - *Community Alliance with Family Farms (CAFF)*: Founded in 1978, CAFF builds sustainable farming and food systems and will support implementation of the Local Farm and Food Innovation (LFFI) component application.
  - *Cultiva La Salud*: Cultiva La Salud creates health equity in the Central Valley by fostering changes in communities that support healthy eating and active living. Cultiva is an implementation partner in the LFFI application.





- *Fresno Area Hispanic Foundation (FAHF)*: FAHF, a U.S. Treasury certified community development financial institution, has been assisting low-income entrepreneurs with their business development needs since 2004. FAHF is the project lead for the SIEMBRA Food Fund. In this role, FAHF will provide invaluable services and insight to the cluster on the needs of micro-enterprises in the food and ag sector.
- *Fresno Metro Ministry*: Since 1970, Fresno Metro Ministry has led community advocacy for health and well-being and is an implementing partner in the LFFI application.
- **Understanding Barriers to Access through CBO-Led Community Engagement**: Included in the Partner Integration and Collective Impact component application are matching funds for CBOs to facilitate engagement with underserved residents from agricultural communities. Through a competitive grantmaking process, the Central Valley Community Foundation will provide funding to the selected CBOs to ensure meaningful community engagement throughout the implementation of the EDA grant.

## SECTION 6: Equitable Sharing of Cluster Benefits

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As an initiative of Fresno DRIVE, equitable sharing of cluster benefits is a core prerequisite of the cluster and has been institutionalized by:

- **Adopting the F3 Guiding Principles for Inclusive Innovation**: F3 has developed and adopted eight inclusion-focused principles that stipulate all core component projects and cluster activities must be (1) Affordable, (2) Appropriately-scaled, (3) Accessible, (4) Translatable and Transferrable, (5) Low-Risk, (6) Multi-Beneficial, (7) Networked and (8) Protective of Privacy. These guiding principles have and will continue to ensure the cluster remains focused on equity and inclusive growth.
- **Embedding Equity and Inclusion as Core Tenets of Component Programs**: F3's component projects each embed inclusion, shared prosperity, and economic mobility for low-wage workers as follows:
  - **iCREATE** – iCREATE coordinates with the Small Farm Tech Innovation Alliance (SFTIA) to place BIPOC and underserved farmers at the center of the innovation process.
  - **AgTEC Programmatic and Construction Applications**: The AgTEC Initiative offers tremendous economic mobility for low-wage workers in the agricultural sector. With a target of ~50% of resources dedicated to incumbent workers at risk of automation, AgTEC invests in wrap-around services and training to increase salaries by an average of 60%.
  - **Local Farm and Food Innovation**: Through the Agroecology Hub and Del Valle, the cluster will work to support local farms and food businesses, particularly historically underserved and small-scale producers, and ensure local food systems have access to capital, markets, training, business support and innovations.
  - **SIEMBRA Food Fund**: By delivering more than \$4.5M through loans to micro-enterprises, mobile vendors, and other small businesses, 90% of which will be BIPOC, SIEMBRA directly invests in historically and presently excluded entrepreneurs.
  - **Opportunity Walkway**: This 1-mile walkway increases access between neighborhoods with the lowest incomes and highest pollution levels<sup>13</sup> in California and Downtown Fresno, the economic center of the region.



- **Partner Integration and Collective Impact:** This project centers race equity outcomes by supporting meaningful community engagement through the life of the EDA grant and funding formal measurement and evaluation to ensure equity outcomes are achieved.




## SECTION 7: Overview of Outcomes

Investments in F3 will accelerate the pace of agrifood tech innovation in the region and lead to (1) a diversified Central Valley economy with high-quality jobs and economic mobility for its residents, especially the underserved; (2) sustainable regional food systems within the Central Valley; and (3) sustainable solutions for global food production. In total, investments in F3 will:

- **Attract \$250M** in private investment;
- **Create/Fill ~10,000 jobs** with an average wage increase of 60%, decreasing the unemployment rate by 1.2% to a 6.3% unemployment rate across the five counties;
- **Employ ~7,000 BIPOC** community members (70% of total created jobs); and
- **Contribute ~\$500M to GDP annually** after 4 years, increasing annual GDP growth rate from ~2.1% (regional 20-year CAGR) to up to 3.0% after 4 years.

To transform the region, F3 has outlined the following specific goals and outcomes for its interrelated applications:

**Figure 10: Overview of Outcomes**

Project	Goals/Intended Outputs	Outcomes
 iCREATE	Establish 75 industry-academic partnerships, developing 100 ag. tech innovations, of which 40% will be commercialized. Attract \$250M non-public sector capital dollars and coordinate 3.5K new research and job opportunities, including 2.5K created for BIPOC and low-income students and incumbent workers	<ul style="list-style-type: none"> <li>• <b>Broad food production industry alignment and engagement</b>, including &gt; 200 dues-paying, committed industry champions contributing to R&amp;D agenda and activities, conferences, exchanges, tech development and demonstration within 4 years</li> <li>• Continually growing <b>portfolio of ~100 industry and university-driven research projects</b> within 4 years, and a <b>robust entrepreneurship ecosystem</b> with 50+ new businesses</li> <li>• <b>Growing investment channel</b> with 15 investors partnered, 60 engaged within the first 4 years, ensuring a consistently high-level of funding to drive cycles of innovation</li> <li>• <b>Industry-aligned, responsive and inclusive middle and high skilled workforce</b>, including a sustainable internship / fellowship model attracting &gt;300 K-14 and university students to full-time careers in agriculture-related industries in the region</li> </ul>
 Local Farm and Food Innovation (LFFI)	Drive industry technology adoption enabling 40% commercialization to 1,000 growers and ranchers. Provide support to 3,000 small-scale and BIPOC farms & food businesses	<ul style="list-style-type: none"> <li>• Regional brand <b>contributes to \$250M in annual investments</b> to support a vibrant local food economy, including &gt;1,000 growers</li> <li>• Marketing training and services delivered to <b>more than &gt;1000 local small-scale farmers, producers, and agrifood business entrepreneurs</b></li> <li>• <b>Increases regional profitability by 30%</b> across crop production systems and scale</li> <li>• <b>Achieves a 40% adoption rate</b> of new sustainable technologies available through the tool library, demonstrations, and co-developed with grower communities</li> </ul>
 AgTEC	Nearly double the annual workforce pipeline to over 8,400 job-ready workers in four years, enabling an increase in average wages of 60% for the workforce	<ul style="list-style-type: none"> <li>• <b>Increased demand-based education regionally</b> through establishing a <b>short-term interdisciplinary certificate in Applied Agriculture Systems</b> across all 8 colleges based on in-demand industry skills</li> <li>• <b>Reskilling and upskilling of ~4K incumbent workers</b> through Competency Based Education taught by college faculty and "worker-instructors" through flexible modules (e.g., online, incumbent workforce training units) <b>positioning workforce to meet rapidly changing needs</b></li> <li>• <b>Improved access to talent pipeline for industry and higher quality jobs for incumbent and future workers</b></li> </ul>

## SECTION 8: Cluster Developments and Progress Updates

**Phase I Planning Efforts** – The F3 coalition has been extremely active during the planning phase of the BBBRC grant with extensive stakeholder / community outreach and detailed business planning for each application, as summarized below.

**Stakeholder / Community Outreach** – The F3 coalition completed two surveys and six stakeholder convenings across its portfolio to solicit input in one or more component applications. Three additional surveys are under way with results expected in July 2022.



- **Agricultural Worker Survey:** The California Farmworker Foundation administered a survey in Spanish for farm and field workers on their perceptions and interests in education and training opportunities. 250 surveys were completed. 55% expressed interest in furthering their training, and 75% considered education to be extremely important.
- **Small BIPOC Farmers Survey:** The Community Alliance with Family Farms surveyed BIPOC farmers to understand the services most needed to sustain and grow their businesses. Of 120 responses, 44.8% identified support for distribution and marketing as the top need with light packaging, crop planting and processing also identified as priorities. Over 90% expressed interest in a centralized food hub.
- **Industry, Faculty, and Mobile Food Vendor Surveys Under Way:** The AgTEC project leads are in the field collecting data from both industry leaders and community college faculty for input into the design and operation of the envisioned AgTEC workforce pipeline. Cultiva La Salud (Local Farm and Food Innovation project) is collecting survey data from mobile food vendors to affirm and assess community priorities.
- **Industry Convening:** On January 26, 2022, over 100 industry leaders and training partners participated in a summit to discuss workforce needs and emerging technologies, which is directly informing AgTEC’s proposal for stackable certificates and degree programs.
- **Community College Faculty Convening:** On March 4, 2022, faculty and administrators representing the eight regional community colleges attended a virtual summit to translate insights from the industry convening into next steps for implementing the AgTEC project.
- **Mobile Food Vendor and Cottage Entrepreneur Convenings:** In January and February 2022, Cultiva La Salud coordinated four in-person meetings in Spanish, Hmong, Syrian, and Lao to determine needs for mobile food vendors and cottage entrepreneurs. Major themes from these community “pláticas” (conversations) were safety concerns, wraparound services for small businesses, and the need for community kitchens to support these micro-enterprises.

Partner Engagement and Business Planning – In addition to the above outreach and engagement, representatives from the coalition (approximately 50 people) met at least twice weekly to refine implementation details for the F3 projects resulting in the following changes and refinements:

- **iCREATE:** Secured \$1M in additional matching funds; added a major institutional partner, UC ANR and its VINE resources, to provide commercialization support; secured commitments from industry to provide volunteer leadership for iCREATE.
- **AgTEC:** Secured \$7.5M in additional matching funds; secured commitments from employers and associations who annually employ more than 400,000 to help develop AgTEC and use it as a major source for new hires annually.
- **Local Farm and Food Innovation:** Secured \$1M in additional matching funds; added a major institutional partner, UC ANR, as the project lead; expanded the focus on agroecological practices to improve local food system resiliency; adjusted the scope for the Hecho En Fresno warehouse from construction / renovation to planning only.
- **Opportunity Walkway:** Secured \$1.14M in total matching funds from the City of Fresno.
- **Partner Integration and Collective Impact:** Added a project to ensure (1) integration across all cluster activities; (2) expanded community engagement during the life of the grant; and (3) shared measurement and evaluation of the efficacy of the F3 projects. Secured an additional \$1M in matching funds for this project.



## WORKS CITED

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1. In the five San Joaquin Valley counties of Fresno, Kings, Madera, Merced, and Tulare, 31.1% of children live in poverty, compared to 18.5% nationally. Source: U.S. Census Bureau, 2015-2019 American Community Survey 5-Year Estimates. [https://data.census.gov/cedsci/table?q=United%20States&t=Official%20Poverty%20Measure&g=0500000US06019\\_06031\\_06039\\_06047\\_06107&tid=ACSST5Y2019.S1701](https://data.census.gov/cedsci/table?q=United%20States&t=Official%20Poverty%20Measure&g=0500000US06019_06031_06039_06047_06107&tid=ACSST5Y2019.S1701)
2. The five-county unemployment rate is 9.2%, compared to 4.5% nationally. Source: U.S. Census Bureau, 2015-2019 American Community Survey 5-Year Estimates. [https://data.census.gov/cedsci/table?q=United%20States&t=Employment%20and%20Labor%20Force%20Status&g=0500000US06019\\_06031\\_06039\\_06047\\_06107&tid=ACSST5Y2019.S2301](https://data.census.gov/cedsci/table?q=United%20States&t=Employment%20and%20Labor%20Force%20Status&g=0500000US06019_06031_06039_06047_06107&tid=ACSST5Y2019.S2301)
3. The San Joaquin Valley metropolitan areas of Fresno-Madera-Hanford, Bakersfield, and Visalia are three of the nation's four most polluted cities for ozone and year-round particle pollution. Source: American Lung Association, State of the Air, 2021. <https://www.lung.org/research/sota/city-rankings/most-polluted-cities>
4. Residents of San Joaquin Valley counties are 165% more likely than in the rest of California to be exposed to the state's most polluted drinking water (top 10% of census tracts by drinking water burden). Source: CalEnviroScreen 4.0. <https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40>
5. Nitrates, produced from manure and fertilizer runoff, have been detected in 97% of wells sampled throughout the San Joaquin Valley. Source: Data cited in National Partnership for Women & Families, et al., Clean Water and Reproductive Justice, 2020. <https://www.nationalpartnership.org/our-work/resources/repro/clean-water-and-reproductive-justice.pdf>
6. McKinsey & Co, unpublished research, March 2022. Job creation assumptions include 240 jobs from funded research projects; 880 jobs from spin-off businesses supported by iCREATE's commercialization support; and 2,655 jobs from small business expansion. 8,400 jobs filled assumption based on available jobs in the region that require upskilling the current workforce. Reduction in unemployment is calculated by applying the jobs created and filled estimate to 2021 FRED unemployment data for the five-county region. Wage growth is calculated with EMSI data comparing low-skilled jobs in the agrifood tech industry filled by workers with no formal education to wages earned by workers with a high school equivalency and some community college CTE training. GDP growth is calculated based on jobs created and filled with wage increase assumptions.
7. The Urban Institute, 2018. "Inclusive Recovery in US Cities." [https://www.urban.org/sites/default/files/publication/97981/inclusive\\_recovery\\_in\\_us\\_cities\\_0.pdf](https://www.urban.org/sites/default/files/publication/97981/inclusive_recovery_in_us_cities_0.pdf)
8. Food Research and Action Center, 2018. "Food Hardship in America." <https://frac.org/wp-content/uploads/food-hardship-july-2018.pdf>
9. Number of farms for each country are taken from the 2017 Census of Agriculture, which tracks number of farms by county; from 2012 to 2017, the number of farms across regions has been decreasing
10. EMSI March 2022. <https://www.economicmodeling.com/>
11. [https://www.brookings.edu/wp-content/uploads/2019/01/2019.01\\_BrookingsMetro\\_Automation-AI\\_Report\\_Muro-Maxim-Whiton-FINAL-version.pdf](https://www.brookings.edu/wp-content/uploads/2019/01/2019.01_BrookingsMetro_Automation-AI_Report_Muro-Maxim-Whiton-FINAL-version.pdf)
12. Bureau of Labor Statistics, U.S. Department of Labor.
13. California Office of Environmental Health Hazard Assessment (OEHHA), 2021. Draft CalEnviroScreen 4.0. OEHHA defines CalEnviroScreen (CES) as "a science-based method for identifying impacted communities by taking into consideration pollution exposure and its effects, as well as health and socioeconomic status, at the census-tract level." CES incorporates a total of 21 measures encompassing pollution exposure, the presence of environmental hazards, population sensitivity, and socioeconomic factors.

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