

MONTEREY BAY

DART

DRONES AUTOMATION & ROBOTICS TECHNOLOGIES

Regional economic development initiative targeting
drones, automation and robotics technologies.

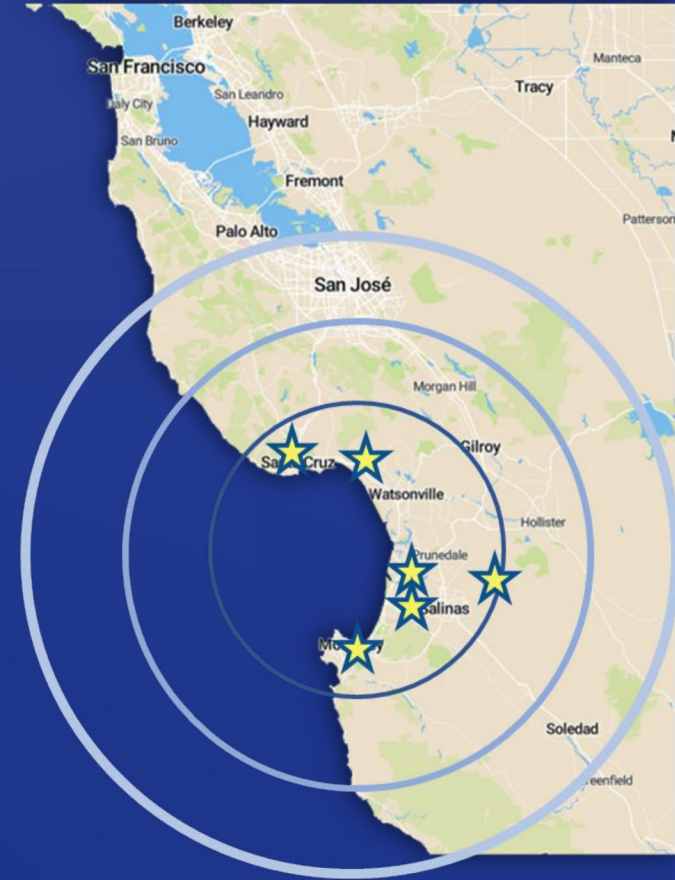


MBDART.org



Monterey Bay DART

Convergence of intentionality, geographic assets, cultural & economic trends, & luck



Board



Amy Gross

*Sustainability Manager
L3Harris*



Andrea Pesce

*Industry Alliances Director
UC Santa Cruz*



Brad Barbeau, PhD

*Professor of Entrepreneurship
CSU Monterey bay*



Chris Bley

*Founder
Airspace Integration*



Cody Cleverly

*Joby Academy Lead
Joby Aviation*



Josh Metz

*Co-Founder
Monterey Bay DART*



Michael Matkin

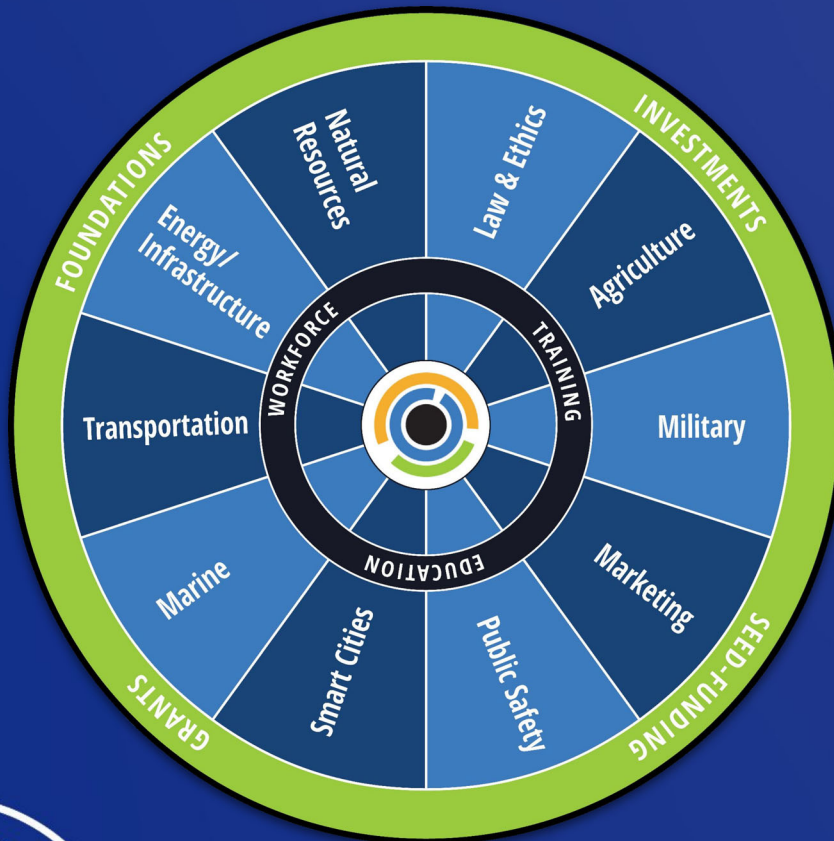
*Executive Director
CITRIS, UC Santa Cruz*



Brooks McChesney

Independent Investor/Advisor

Vision



Industry

- Companies
- Products
- Services
- Capital
- Entrepreneurs

Government

- Policy
- Infrastructure
- Regulation
- Funding

Academia

- **Education**
- R&D
- Innovation
- **Talent**

Community

- **Workforce**
- Integration
- Services
- Advocacy





DART
DRONE AUTOMATION & ROBOTICS TECHNOLOGIES





 **DART**
DRONE AUTOMATION ROBOTICS TECHNOLOGIES









 **DART**
DRONE AUTOMATION & ROBOTICS TECHNOLOGIES

Manufacturing Trends



Monterey Bay Region – 2022Q3

EMPLOYMENT

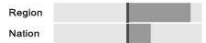


16,919

Regional employment / 12,958,908 in the nation

1.7% ↑

Avg Ann % Change Last 10 Years / +0.6% in the US



5.0%

% of Total Employment / 8.1% in the US



WAGES

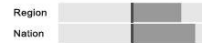


\$72,016

Avg Wages per Worker / \$79,193 in the nation

2.3% ↑

Avg Ann % Change Last 10 Years / +2.9% in the US



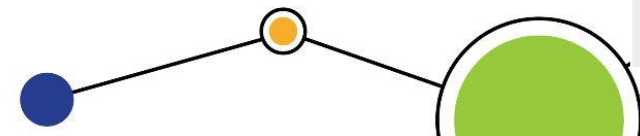
TOP OCCUPATION GROUPS



Staffing Pattern



6-digit Occupation	Empl	Avg Ann Wages	Annual Demand
Team Assemblers	935	\$41,500	92
Packaging and Filling Machine Operators and Tenders	887	\$37,300	105
Laborers and Freight, Stock, and Material Movers, Hand	567	\$40,500	81
First-Line Supervisors of Production and Operating Workers	502	\$67,400	51
Food Batchmakers	478	\$36,400	69
Inspectors, Testers, Sorters, Samplers, and Weighers	471	\$47,100	50
Industrial Truck and Tractor Operators	382	\$42,700	45
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	358	\$82,700	35
Packers and Packagers, Hand	326	\$34,700	52
General and Operations Managers	280	\$133,300	25
Remaining Component Occupations	11,705	\$70,500	1,280
Total	16,889		

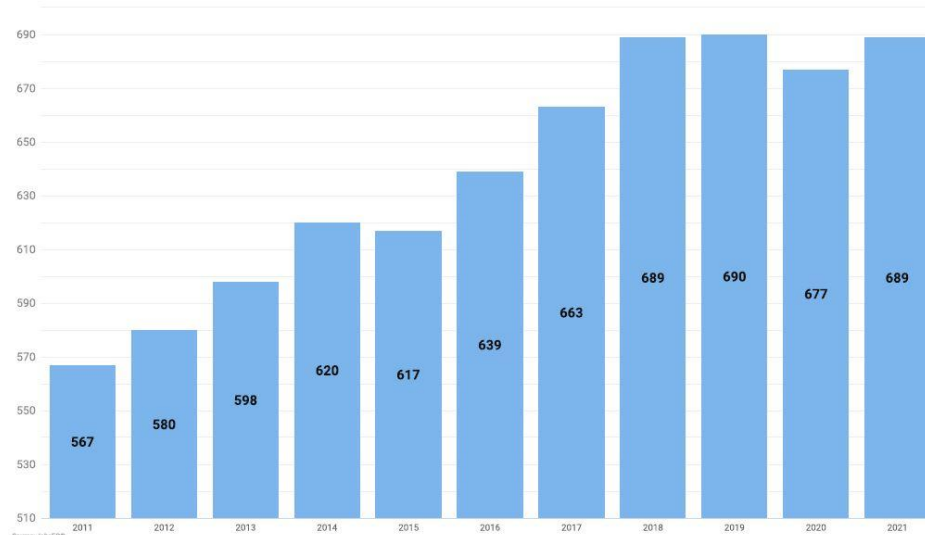


Manufacturing Trends



Establishments

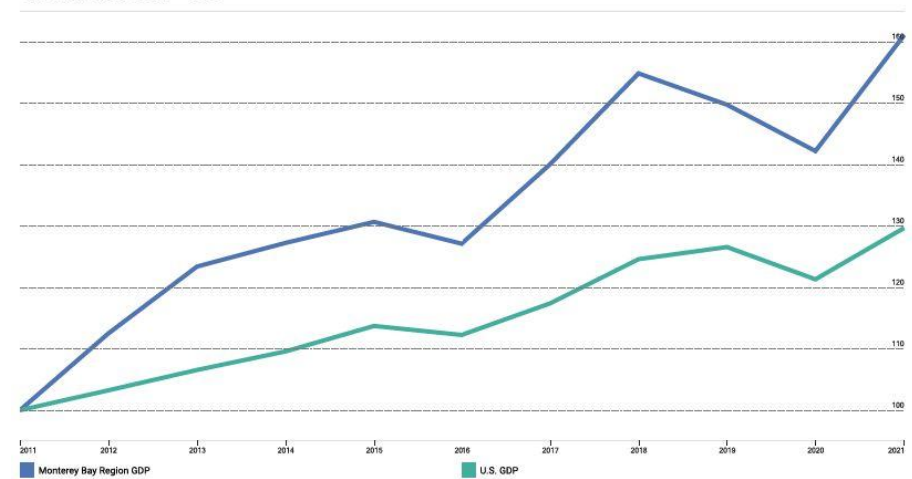
In 2021, there were 689 Manufacturing establishments in the Monterey Bay Region (per covered employment establishment counts), an increase from 567 establishments ten years earlier in 2011.



GDP & Productivity

In 2021, Manufacturing produced \$2.8 billion in GDP for the Monterey Bay Region.

GDP: Indexed 2011 = 100



6.9 %

Industry Share of Total GDP /
10.6 % in the nation



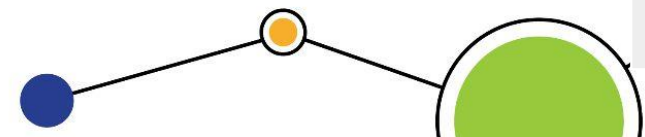
4.9 % ↑

Avg Ann % Change Last 10 Yrs /
2.6 % in the nation



\$569k

Output per Worker /
\$600k in the nation



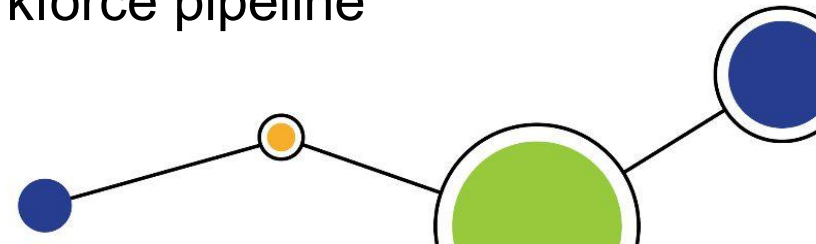
Joby Apprenticeship



- 15+ full time paid apprenticeships
- 6-month on-the-job training



- Path to permanent employment
- Build sustainable workforce pipeline



Partnerships: UCANR & CITRIS

The CA Climate Smart Agrifood Innovation Engine is the Solution

Connects

- Use-inspired Research
- Commercialization & Entrepreneurship
- Workforce Development

...across regions that focuses on CA's unique industry and communities

Advances

Agrifood technologies intersecting:

- Digital (AI & data)
- Mechanical (robotics & automation)
- Biological (genomics & bioproducts)

Amplifies

Each region's innovations and assets:

- Industry
- Universities
- Communities
- Unique markets, resources, expertise

Grows

Economies & innovation ecosystems by:

- Advancing tech equipment
- Local entrepreneurship support
- Training & upskilling workers
- Focusing on underserved populations

The CA Agrifood Engine

Central Valley
Central Coast
Southern CA

THE VINE

University of California
Agriculture and Natural Resources

UNIVERSITY OF CALIFORNIA
Agriculture and Natural Resources



DroneCamp 2023

June 26-30

CSU Monterey Bay & Virtual

safety & regulations | flight skills
mission planning | hardware and sensors
data processing | analytics

UNIVERSITY OF CALIFORNIA | IGIS | UC ANR | UC SANTA CRUZ | CITRIS | CSU MONTEREY BAY | DART

Salinas & Pajaro Valleys DART Skills Demand Study - 2023



Partnerships: CSUMB

DART Workforce Training Center Feasibility Study 2023



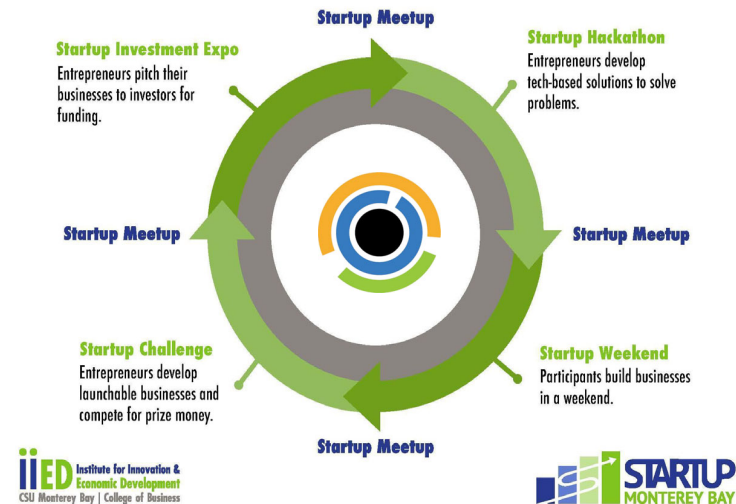
California State University
MONTEREY BAY
Extraordinary Opportunity

Conceptual Site Design
DMAT




- Site Selection
- Demand
- Skills
- Program
- Structure
- Format
- Funding

Annual Cycle of Innovation



Partnerships: NRL - NASA/FAA

 **AIRSPACE INTEGRATION** Aerospace innovation hub on the Monterey Bay



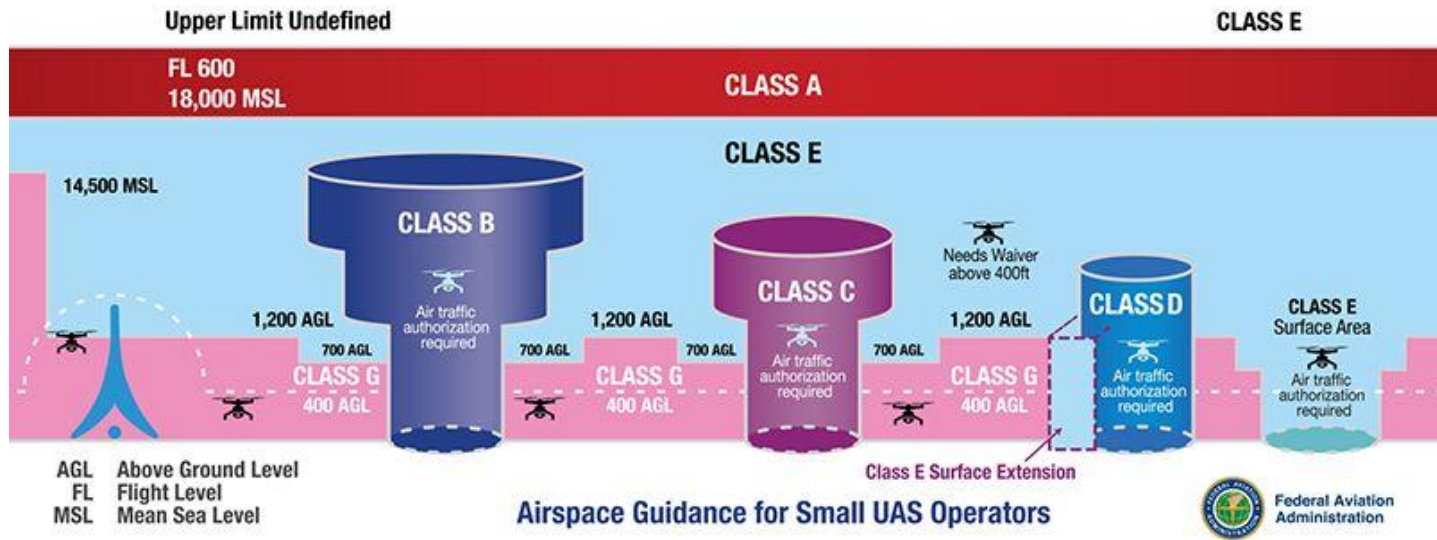
Urban Air Corridor Weather Support





Central Coast

Flight Information Xchange



cc-fix.com



Partnerships: Joby @ Marina



UC SANTA CRUZ



Partnerships: Navalx Tech Bridge



DoD Port & Maritime Security Innovation development, testing, and education ecosystem

<https://antx.org/coastal-trident/>



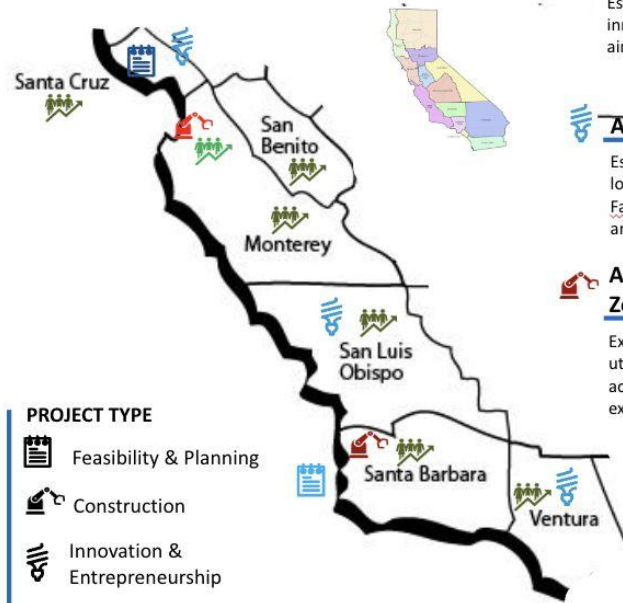
- Discussions /Planning
- Field Experimentation
- Operations-based Activities



Partnerships: Uplift Central Coast



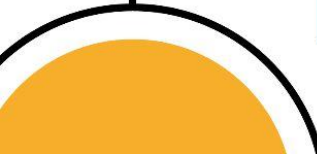
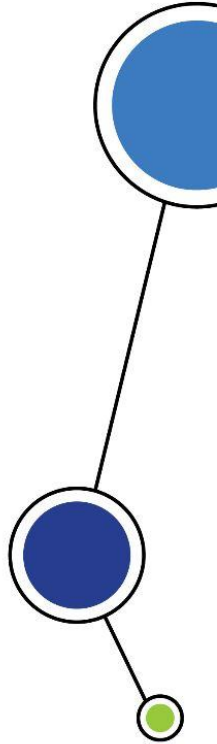
THE UPLIFT VISION: A REGION-WIDE ECONOMIC REVITALIZATION EFFORT FOR CALIFORNIA'S CENTRAL COAST



- PROJECT TYPE**
- Feasibility & Planning
 - Construction
 - Innovation & Entrepreneurship
 - Workforce Development

<https://reachcentralcoast.org/upliftcentralcoast/>

- VSFB Mission Development Zone**
 Develop Public Private Partnership for a commercial space industry tech park at VSFB.
- Drone + Aeronautics Innovation District**
 Establish a multi-disciplinary research park and innovation district focused on aerospace, advanced air mobility, and uncrewed aerial vehicles.
- Aerospace Incubator Centers Network**
 Establish Centers of Excellence in 3 locations: UCSC, Cal Poly and Ventura Fathomwerx. Centers will support research and innovation in aerospace-related fields.
- Aerospace Commercial Zone Infrastructure**
 Extend airport-area road and integrate utilities to improve circulation and airport access for aeronautics business expansion.
- CC Space + Aeronautics Skills Alliance**
 Expand existing—and develop new—training programs at regional community colleges.
- iINNOVATE K12 STEM Pathways**
 Expand equitable access to K12 STEM opportunities through campus innovation labs and teacher training.
- CTE Aeronautics Program**
 Expand and scale Bob Hoover Academy, a program that provides students access to earn a high school diploma in courses focused on STEM education in aeronautics and aviation mechanics.
- CSU Monterey Bay Science + Engineering Building**
 Establish a leading science education space that will provide the labs and space to train the next generation of engineers in aerospace and robotics.



DART Symposium

MBDART.org

2022 SYMPOSIUM KEYNOTE SPEAKERS



BONNY SIMI
 JOBY AVIATION
 Bonny Simi is Joby Aviation's Head of Air Operations and...



DEAN DONOVAN
 DIAMOND STREAM PARTNERS
 Dean Donovan is the Managing Director and Co-Founder of Diamond...



DON HOWARD
 THE JAMES IRVINE FOUNDATION
 Don is President and CEO of The James Irvine Foundation...



TONY TAVARES
 CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS)
 Tony Tavares was appointed the 34th Director of the Department...

Invited Symposium Speakers & Panelists



YOTAM AVRAHAMI
 DELOITTE
 Yotam Avrahami leads commercial and PPP (Private Public Partnerships) projects with...



YOLANKA WULFF
 COMMUNITY AIR MOBILITY INITIATIVE
 Yolanka Wulff is Executive Director of CAMI, the Community Air...



VANYA QUIÑONES
 CSU MONTEREY BAY
 Vanya Quiñones became the fourth president of California State University...



TAHRA GORAYA
 MONTEREY BAY ECONOMIC PARTNERSHIP (MBEP)
 Tahra brings to MBEP strong skills in leadership, management, policy...



Watch 2022 Session Videos



Stay Engaged!

- Membership
- AMAP
- Drone Camp
- Collaborations
- Meetups
- **DART Symposium**
Oct 10-13, 2023

