

# Innovation and Automation

Inland Empire/Desert Region

Project 49 – Round 6

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Collaborative Development of Innovation and Automation Programs

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## BACKGROUND

While California's robust innovation ecosystem (university research institutions, federal labs, and private industry) is well suited to support Research and Development needs to develop new technologies, there is a need to support the firms involved by creation of a related trained workforce pipeline. This **Innovation and Automation Strong Workforce Project** is ideally suited to provide solutions to help develop the workforce pipeline for automation, prototyping, fabrication, composites, robotics, mechatronics, flexible hybrid electronics, 5G and autonomous technologies.

## PROJECT SUMMARY

### IEDRC P49 R6 Innovation and Automation

This project is designed to allow investment that support collaborative development of in-demand programs, facilitate facility adaptation and equipment purchase to accommodate those programs, increase employer engagement, provide incumbent worker and faculty professional development, recruit new faculty to CTE programs, and gain/maintain required student experience with industry partners and/or alternative experiential learning opportunities.

Supporting program development in any/all of these areas (automation, prototyping, fabrication, composites, robotics, mechatronics, flexible hybrid electronics, 5G and autonomous technologies) will ensure well trained faculty, involvement of industry partners, new programs and better regional alignment. These are necessary factors to increase the numbers of students who gain employment in their field of study.

#### Areas of Investment:

- Program Development
  - Employer Validated Skills Gap Identification
  - Community of Practice
- Faculty Training and Professional Development
- Curriculum Development
- Program Implementation
  - Facility accommodation for new technologies.
- Industry Engagement
  - Project Management

The investments made in this project align with our regional goal, to facilitate student progression and completion in pathways.



# SAMPLE COMMUNITY COLLEGE INVOLVEMENT

- PROGRAM DEVELOPMENT
  - Faculty and/or Staff Attend Skills Panels
  - Faculty and/or Staff Participate in Community of Practice
- FACULTY DEVELOPMENT
  - Externships for Faculty Member(s)
  - Training for Faculty Member(s)
- CURRICULUM DEVELOPMENT
  - Faculty Assist in Course Design
  - Faculty Champion Shepherds Program Through College Approval Process
  - Administration Shepherds Program Through Regional/State Approval Process
- PROGRAM IMPLEMENTATION
  - Identify Facility and Adaptation Needed
  - Purchase Needed Equipment
  - Purchase Needed Materials
  - Administration Schedules Courses/Program and Assigns Instructor
- EMPLOYER ENGAGEMENT (non-host college)
  - Support Employer Connections
  - Attend Regional Events

## POSSIBLE BUDGETS

Recap of Optional Investments (*TOTAL AMOUNT FOR EACH PARTICIPATING COLLEGES*)

Activity that applies to this budget item	Budget Amount	one-time or ongoing	Brief description of <i>OPTIONAL</i> expenditure
<b>Identify Employer Skill Needs</b> 1000 (Salaries) 2000 (Non-Instructional Salaries) 3000 (Benefits) 4000 (Supplies and Materials) 5000 (Other Operating Expense) <b>Total Possible Investment</b>	\$0 to \$10,000 \$0 to \$10,000 \$0 to \$8,000 \$0 \$0 to \$1,000 <b>\$0 to \$29,000</b>	Ongoing	Stipend(s) for Meeting Attendance (if applicable) Stipend(s) for Meeting Attendance (if applicable) Benefit Expense(s) for Meeting Attendance (if applicable) Non-Instructional Supplies Meeting Facilitation Expense
<b>Faculty Externship, Faculty Training and Conference(s)</b> 1000 (Salaries) 3000 (Benefits) 4000 (Supplies and Materials) 5000 (Other Operating Expense) <b>Total Possible Investment</b>	\$0 to \$20,000 \$0 to \$8,000 \$0 to \$20,000 \$1,000 <b>\$0 to \$49,000</b>	One Time	Stipend(s) for Training and/or conference(s) Attendance (if applicable) Benefit Expense(s) for Training and/or conference(s) Attendance (if applicable) Fees and Materials costs for Training and/or conference(s) Meeting Facilitation Expense
<b>Curriculum Development</b> 1000 (Salaries) 3000 (Benefits) 4000 (Supplies and Materials) 5000 (Other Operating Expense) <b>Total Possible Investment</b>	\$0 to \$10,000 \$0 to \$4,000 \$0 to \$8,000 \$0 to \$5,000 <b>\$50 to \$27,000</b>	One Time	Stipend(s) for Curriculum Development (if applicable) Benefit Expense(s) for Curriculum Development (if applicable) Non-Instructional Supplies Meeting Facilitation Expense
<b>Program Implementation</b> 1000 (Salaries) 3000 (Benefits) 4000 (Supplies and Materials) 5000 (Other Operating Expense) <b>Total Possible Investment</b>	\$0 to \$10,000 \$0 to \$4,000 \$0 to \$2,000 \$0 <b>\$0 to \$16,000</b>	One Time	Stipend(s) for Program Implementation (if applicable) Benefit Expense(s) for Program Implementation (if applicable) Non-Instructional Supplies Meeting Facilitation Expense
<b>Facility Adaptation, Equipment and Materials</b> 1000 (Salaries) 3000 (Benefits) 4000 (Supplies and Materials)  5000 (Other Operating Expense) 6000 Capital Outlay <b>Total Possible Investment</b>	\$0 \$0 \$0 to \$200,000  \$0 to 500,000 \$0 to 500,000 <b>\$0 to \$1,200,000</b>	One Time	Instructional Salaries Benefit Expense(s) Non-Instructional Supplies including Expenses for licenses and consumables necessary to implement the program. (i.e., ESRI Site Scan @\$5,000 or ESRI Drone2Map @\$1,500 plus classroom licenses, etc.) Expense related to acceptable funding of facility adaptation to accommodate new/improved program(s) Expense related to acceptable funding of facility adaptation capital improvements (as allowed by law).
<b>Total Optional College Investment</b>	<b>\$0 to \$1,321,000</b>		

Recap of Required Investments (*TOTAL AMOUNT SHARED BY PARTICIPATING COLLEGES*)

Activity that applies to this budget item	Budget Amount	one-time or ongoing	Brief description of <i>OPTIONAL</i> expenditure
<b>Identify Employer Skill Needs</b>	\$1,000	One Time	Facilitation Expense for meetings
<b>Faculty Externship, Training and Conference(s)</b>	\$1,000	One Time	Facilitation Expense
<b>Curriculum Development</b>	\$1,000	One Time	Facilitation Expense
<b>Employer Engagement</b> 2000 (Salaries) 3000 (Benefits) 4000 (Supplies and Materials) 5000 (Other Operating Expense) <b>Total Required College Investment</b>	\$128,000 \$35,000 \$5,000 \$25,000 <b>\$196,000</b>	Ongoing	Expenses for Employer Engagement and Project Management
<b>Total Required College Investment</b>	<b>\$196,000</b>		<b>Total Amount Shared by Participating Colleges</b>