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July 31, 2007 - California Innovation Corridor

PROPOSED METRICS FOR WORKFORCE INNOVATION IN REGIONAL ECONOMIC DEVELOPMENT (WIRED)

| Project | Partners (* indicates lead) | Customers | Timelines/Critical Path Activities | Expected Metrics (Outcomes/Outputs) | Transformation (longer term impacts possibly beyond life of project) |
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| <p>1.1 Economic Development Model Creation of an economic development innovation model and "tool kit" featuring replicable innovation support elements for regional innovation, innovator skill-building, technology commercialization and entrepreneurial growth.</p> | <p>Bay Area Economic Forum/Bay Area Science Innovation Consortium (BAEF/BASIC)*</p> <p>California Council on Science & Technology (CCST)</p> <p>California Space Authority (CSA)</p> <p>Los Angeles Economic Development Corporation (LAEDC)</p> <p>East (San Diego) County Economic Development Corporation (ECEDC)</p> <p>San Luis Obispo Economic Vitality Corporation (SLOEVC)</p> <p>Chabin Concepts</p> <p>Golden Capital</p> | <p>Economic Development Organizations (EDOs) and ED stakeholders</p> <p>Workforce Investment Boards (WIBs)</p> <p>State</p> <p>Entrepreneurs and Innovation-Oriented Companies</p> | <p>Research innovation, innovation strategies, potential drivers and creative economic development tools (Years 1/2)</p> <p>Create template for entrepreneur bootcamp module/ venture community culture-building event (Year 2)</p> <p>Determine and design elements of replicable innovation and entrepreneurship training module for EDOs (Year 2)</p> <p>Recruit innovators, sponsors, report writer; coordinate logistics for Innovation Roundtable (Years 1/2)</p> <p>Recruit innovators, entrepreneurs, angels, sponsors and innovation support presenters; coordinate logistics for development of Venture Communities, entrepreneurship culture-building events (Year 2/3)</p> <p>Determine speakers, topics for EDO/WIB briefings (Years 2/3)</p> <p>Coordinate matchmaking event for entrepreneurs/potential</p> | <p>Training of 30 entrepreneurs as part of "entrepreneur bootcamp" module of key entrepreneurship culture-building event in three target "venture communities" (interface w/Proj. 1.4, 3.14) Track applicable common measures - MCSC</p> <p>Replicable innovation and entrepreneurship training module for EDOs (interface w/Proj. 1.4) CSA</p> <p>Entrepreneur bootcamp event template to foster replication of entrepreneur instruction/support across Corridor (interface w/ Proj. 1.4) CSA</p> <p>Creation of economic development innovation kit to include insights, sample innovation support projects (interface w/ 1.3, 1.4, 1.7 and 3.5, 3.14) BASIC</p> <p>Establishment of three "Venture Community" pilot projects supporting entrepreneurship development and sustainability (interface with Project 1.3, 1.4, 1.7, 3.5, 3.14) GCN</p> <p>Innovation roundtable event/report highlighting</p> | <p>Ongoing instruction of EDOs regarding innovation support strategies, tools generating from development of Economic Development Innovation Kit</p> <p>Crafting of innovation support methods by economic sub-regions based on Economic Development Innovation Kit, informed by WIB "Racing for the Future" Toolkit (1.7), the Learning Collaboratory (3.14) the Innovation Asset Inventory (1.3) and the Science, Technology, Engineering and Math Collaborative Action Plan (STEMCAP) (3.5)</p> <p>Increase in economic impact in three pilot Venture Communities</p> <p>Greater understanding and support of innovation and entrepreneurship statewide through CALED/WIRED affiliation</p> <p>Visible support for innovation and entrepreneurship on State economic development agenda</p> |

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| | | | <p>international partners (Year 2)</p> <p>Complete Corridor portal design according to design document in Proj 1.3</p> <p>Coordinate with Project Teams 1.3, 1.4, 1.7 and 3.5 in regard to integration of insights and learnings around innovation for inclusion and/or highlighting in Economic Development Innovation Kit (Year 2)</p> | <p>innovation insights from 25 Bay Area innovators BASIC</p> <p>Identification and description of regional innovation drivers (interfaces with Proj. 1.3, 1.4, 1.7, 3.14) CSA, BASIC, ECEDC, SLOEVC, LAEDC, CCST.</p> <p>Innovation briefing to 50 economic development stakeholders at statewide California Local Economic Development (CALED) conference, introducing them to development of economic development innovation kit (interface with Proj. 1.3, 1.4) CSA, BASIC, ECEDC, Chabin</p> <p>Innovation briefing to 25 WIB stakeholders, introducing them to development of economic innovation kit incorporating WIB toolkit highlights (interface with Proj. 1.7, 3.14)) CSA, BASIC, ECEDC, CCST</p> <p>Featuring innovation assets identified and profiled in Project 1.3, new California Innovation Corridor web portal created as part of the California Connectory ECEDC</p> <p>As element of Venture Community pilot, minimum of 10 new innovation partnerships established supporting entrepreneurship GCN</p> <p>Introduction of at least 5 entrepreneurs to prospective international partners CSA</p> | |
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| <p>1.2 21st Century Worker Profiles to define future workforce skills of three target career paths</p> | <p>BAEF/BASIC* CCST CSA LA County Workforce Investment Board (WIB) (unfunded) NOVA Riverside WIB San Bernardino WIB South Bay WIB South Bay Economic Development Partnership (SBEDP) San Diego Workforce Partnership (SDWP)</p> | <p>Training Providers for planning support WIBs for future workforce needs identification 21st Century workforce employers Economic development entities</p> | <p>Define industries/careers to be studied (Year 1) Identify firms, universities and labs for study (Year 2) Conduct research (Year 2) Coordinate with Learning Collaboratory and Economic Development Toolkit (Year 2) Develop regional training strategies, with suggested approaches for leveraging resources (Year 3)</p> | <p>Develop job profiles for three careers in targeted advanced industry sectors All Partners Identify workforce skills in the three careers identified in the job profiles All Partners Identify regional training strategies to address skill shortages NOVA, Riverside WIB, San Bernardino WIB, South Bay WIB Track number of organizations that receive and/or utilize the profiles and other products - All Partners</p> | <p>Implementation of regional training strategies to address skill shortages</p> |
| <p>1.3 Innovation Asset Inventory to be used by regional partners to better understand the assets available to foster innovation and entrepreneurship</p> | <p>BAEF/BASIC* CSA ECEDC Antelope Valley Board of Trade (AVBOT) - inkind Greater Antelope Valley Economic Alliance (GAVEA) Kern Co. Economic Development Corporation (Kern EDC) LAEDC City of Lompoc Economic Development Department</p> | <p>Workers, for understanding breadth and diversity of local companies with potential openings Primes and suppliers for products, services, partnerships, specialized work, expertise Workforce Investment Boards (WIBS) for understanding the employers and skill sets needed in their regions Economic Development entities for referrals, understanding of their regions, cluster work</p> | <p>Develop CIC innovation asset templates (Year 1) Inventory 150 key innovation assets (Year 1) Design the CIC "portal" within the Connectory.com to display, search and link innovation assets to CIC partners and companies (Year 1)</p> | <p>Incorporation of 150 Corridor innovation asset profiles (companies, universities, federal labs) into the California Connectory ECEDC - Completed Development of 1 template/1 guide for federal labs/military installation profiles All Partners - Completed Development of 1 template/1 guide for University profiles All Partners - Completed Development of 1 template/1 guide for industry profiles All Partners - Completed 100 economic development</p> | <p>Increase in relevant economic indicators (identified in 1.4) for communities where assets are inventoried, indicators such as jobs created, business start-ups or expansions, patents obtained, and VC investments</p> |

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| | <p>Orange County Workforce Investment Board (OCWIB)</p> <p>SBEDP</p> <p>SLOEVC</p> <p>San Berdu WIB</p> <p>Ventura County Economic Development Association (VCEDA)</p> <p>University of California, Riverside (UCR)</p> | <p>Government, for understanding local, regional and statewide buyer-supplier activity</p> | | <p>and/or WIB organizations advised of the products above, oriented to their use in economic and workforce development – CSA, ECEDC, BASIC</p> | |
| <p>1.4 Entrepreneurial Ventures Demonstration Project Demonstration project with entrepreneurial companies including Small Business Innovation Research (SBIR) Phase II awardees to identify best practices in helping innovative companies to commercialize technology and create jobs</p> | <p>ECEDC*</p> <p>SDWP</p> <p>LA County WIB</p> <p>Golden Capital Network (GCN)</p> <p>CSA</p> <p>LAEDC</p> <p>Mission Community Service Corporation (MCSC)</p> | <p>Entrepreneurial companies</p> <p>Economic Development and Workforce Stakeholders</p> | <p>Coordinate logistics, instructors, recruit participants for Vision to Venture courses (Years 1/2)</p> <p>Development, design of replicable entrepreneur, WIB instruction modules (Year 2)</p> <p>Research entrepreneur training resources (Years 1/2)</p> <p>Coordinate logistics, secure 20 participating investors and 20 Innovation All-Stars for involvement in entrepreneur support model (Years 1/2)</p> <p>Facilitate participation of 10 companies, at least two of them SBIR companies, in successfully moving products or services to commercialization (Years 1/2)</p> <p>Monitor target companies, gathering data for reporting out of progress indicators</p> | <p>At least two “From Vision to Venture” 14-week courses with targeted enrollment of 25 students in each course. Track applicable common measures. MCSC-Completed</p> <p>Track number of students beginning Vision to Venture training, number completing training. MCSC- SLOPIC?</p> <p>A replicable training module for instructing entrepreneurs, to be shared with Project 3.14 MCSC, CSA</p> <p>Replicable innovation and entrepreneurship training module for WIBs (interface with Project 1.1, 1.7 and 3.14) SDWP, CSA</p> <p>Matrix of entrepreneur training resources resident in Corridor to be shared with EDOs, WIBs (through Project 3.14)CSA, SDWP, LAEDC</p> <p>Replicable entrepreneur</p> | <p>State/EDO/WIB development of effective entrepreneurship support strategies and programs</p> <p>Acceleration of commercialization for Corridor entrepreneurs</p> <p>Increase of contribution to economic impact by entrepreneurial sector of Corridor</p> <p>Cumulative and aggregated data on economic impact of entrepreneurial companies supported in project</p> |

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| | | | <p>(Years 2/3)</p> <p>Research and determine indicators reflecting economic growth in entrepreneurial companies (Years 1/2)</p> <p>Develop best practices from data collected from participating Innovation All-Stars (Year 3)</p> | <p>“best practices” support model (All-Star event with funding/commercialization features) to become an element of the Economic Development Innovation Kit in Project 1.1, with model to address ongoing entrepreneur support needs; model to be shared with Project 1.7 WIB Toolkit/3.14 WIB Learning Collaboratory – CSA, ECEDC</p> <p>Identification of indicators reflecting economic growth in entrepreneurial companies (interface with Project 1.1, 1.7, 3.14)CSA</p> <p>Documentation of the number and type of businesses benefiting, services received from the project during its term CSA, LAEDC</p> <p>For entrepreneurial companies mentored through this project, reporting of level/status of progress indicators, CSA</p> | |
| <p>1.5 Pilot: Joint Professorial and Student Exploration of Innovation/Entrepreneurship Environment</p> | <p>Stanford University*</p> <p>UCR</p> <p>CSA</p> | <p>Innovation companies looking for employees</p> <p>University programs seeking to foster innovation</p> <p>Workforce and economic development entities seeking university innovation resources</p> | | <p>“Action Research” model to engage minimum of two professors, two students at University of California Riverside in exploration of innovation/entrepreneurship with goal of transforming academic understanding and teaching of innovation (linkage with 1.1, 1.7 and 3.5) UCR</p> <p>“Action Research” model to engage minimum of two professors, two students at Stanford University in exploration of innovation/entrepreneurship with goal of transforming</p> | <p>Real – world innovation culture to become the basis of teaching and learning about innovation in university setting</p> <p>Stronger linkage between companies, professors participating in project – leading to future partnering</p> |

ATTACHMENT 1

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| | | | | <p>academic understanding and teaching of innovation (linkage with 1.1, 1.7 and 3.5) Stanford</p> <p>Action Research model above to include:</p> <ul style="list-style-type: none"> • Literature review of best practices in technology transfer and innovation • Multi-day site visits, tours, con-sultations and interviews with executives of at least six companies to identify elements of successful innovation in a corporate setting • Identification of key elements of how innovation is fostered and commercialized in real world corporations • Summary report of each of 6 corporate consultations • Student/Faculty Practicum with presentation of key learnings • Findings to be reported in various professional publications and industry fora, including UC Riverside Industry Week, UC Riverside Tech Horizons conferences, the Stanford Innovation Summit | |
| <p>1.6 University and Student Payload Demonstration Project Demonstration project to create development model of small payload launcher (NPGS yet to be engaged due to military requirements for contracting)</p> | <p>CSA* Naval Postgraduate School (NPGS) – contract pending</p> | <p>University students and professors</p> <p>Space entrepreneurs and small business</p> | <p>Attend CubeSat/RideShare conferences to inform needs/requirements assessment (Years 1, 2, 3)</p> <p>Draft and validate requirements/process document (Year 2)</p> <p>Build development model to</p> | <p>Minimum of two professors and 20 students engaged in creation of a development model of a CubeSat launcher for EELV launch vehicle demonstrating ability to deploy multiple university CubeSats on military launches (interface with Project 3.5)</p> | <p>CubeSat launcher deployed on EELV launch vehicle, placing multiple university payloads on-orbit</p> |

ATTACHMENT 1

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| | | | align with specifications identified in requirements/process document (Year 3) | Development of requirements/process document to instruct university and student payload developers necessary specifications for payloads seeking military launch acceptance (linkage with Project 3.3) Minimum of two rideshare orientation briefings presented to potential university/student launchers (linkage with white paper development, dissemination in 3.2, Project 3.3) | |
| 1.7 WIB Toolkit "Racing for the Future" Toolkit, designed for Workforce Investment Boards (WIBS) innovation in alignment with CIC WIRED transformational goals | CCST* California Workforce Association (CWA) California Education and Workforce Institute (CSEWI) | WIBS desiring to help lead the development of a regional innovation culture Economic development entities interested in better understanding WIB assets and potential role in development of regional innovation culture Companies/individuals considering WIB services, volunteer opportunities Government and other funders interested in sustainability of fostering an innovation culture | Task and content development, refinement of work plan (Year 1) Identification of background research/data collection needs (Year 1) Collection of background research/data (Year 2) Development of working draft of Toolkit (Year 2) Key stakeholder (WIB/elected officials) review/feedback to Toolkit draft (Year 2) Sharing of draft Toolkit with WIBS at CWA "Meeting of the Minds" conference (Year 2) Prepare and seek input on revised Toolkit draft based on stakeholder input (Year 2) Produce final WIB Toolkit (Year 3) Roll out Toolkit and product derivatives for use by WIBS | Completion and publishing of the WIB Toolkit designed to stimulate understanding of and foster an innovation culture throughout California WIB network. Toolkit to include three major components: (1) How Science is Changing Industry Skill Requirements for California's New Workforce (2) The WIB as Strategic Planner for the Development of Local Workforce Policy (3) An Annotated Bibliography of Research on Bridging Community Organizations to Take Advantage of Opportunities for Workforce Development CSEWI, CCST, CWA Production of brief annotated bibliography of surveys and other major research documents that identify how WIBs in particular, other business and professional associations as well, have identified potential challenges/solutions like those in Innovation Corridor | Innovation support by individual WIBs and the WIB network through workforce policy, strategic plans and programs throughout California based on the "Racing for the Future" Toolkit informed by the Economic Innovation Kit (1.1) Learning Collaboratory (3.14), the Innovation Asset Inventory (1.3), and the STEM Collaborative Action Plan (3.5) |

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| | | | <p>(Year 3)</p> <p>Provide discussion on impact of Toolkit to date at annual "Meeting of the Minds" conference (Year 3)</p> <p>Orient various audiences to WIB Toolkit through forums throughout Corridor (Year 3)</p> | <p>(appendix to Toolkit) CCST</p> <p>Six case studies of successful WIBs, business associations, community colleges or others that have successfully joined together and responded to a high technology and workforce development opportunity (To include key findings from Project 3.14) CCST, CWA</p> <p>Creation of a 10-person working group of leading WIB administrators, community colleges, economic development experts, labor and other groups facilitated by CCST and CWA to prioritize research findings, fill in gaps and flesh out more details for the "Racing for the Future" Tool Kit CCST, CWA</p> | |
| <p>2.1 Supply Chain Advisory Group and "Smart Supplier" Survey Create a Supply Chain advisory body, characterize the Supply Chain Transformation, identify priority supplier training needs and develop Supply Chain survey</p> | <p>CSA*</p> <p>AvBot</p> <p>SVLLC</p> <p>Antelope Valley College (AVC)</p> | <p>Supply Chain Training Providers</p> <p>Suppliers</p> <p>Primes</p> <p>WIBs</p> <p>Economic Development Organizations (EDOs)</p> | <p>Recruit Steering Committee (Year 1)</p> <p>Host orientation webinar (Year 1)</p> <p>Recruit industry and stakeholder presenters, panelists for Supply Chain Transformation/Training Forum (Years 1)</p> <p>Create and disseminate survey polling industry needs/requirements resulting from Supply Chain Transformation (Year 2)</p> | <p>Recruitment of at least 15 key supply chain stakeholders for Supply Chain Industry Advisory Group (SCIAG) to provide Forum inputs and expertise in developing outputs of Project 2.2 SVLLC, CSA - Completed</p> <p>Supply Chain Transformation Orientation Webinar for SCIAG SVLLC, CSA - Completed</p> <p>Minimum of two industry briefings on supply chain transformation2 SVLLC, CSA - Completed</p> <p>Minimum of three training provider or other supply-chain stakeholder briefings addressing supply chain training needs. 2 SVLLC,</p> | <p>Increase in number of suppliers seeking training to respond to supply chain transformation</p> <p>Supply Chain Training Providers comparing current curriculum to new training needs resulting from Supply Chain Transformation</p> <p>WIB understanding of, addressing of new worker skills needed as result of Supply Chain Transformation</p> |

ATTACHMENT 1

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| | | | | <p>CSA - Completed</p> <p>Forum characterizing Supply Chain Transformation/Training Needs with minimum of 40 attendees 2 SVLLC, CSA - Completed</p> <p>Development of Supplier Network Transformation Survey to inform/educate suppliers and assess current state of supplier network (Interface with Project 2.2, 2.3 and 2.4) CSA - Completed</p> | |
| <p>2.2 Smart Supplier Maturity Capabilities Model and Common Learning Outcomes Characterize in a supplier Maturity Capabilities Model (MCM) foundational "smart supplier" global competitiveness skills, articulating a set of common smart supplier requirements and common learning outcomes across supply chain training provider network; demonstrate criticality of accelerated information flow throughout supply chain and provide training resource matrix</p> | <p>CSA*</p> <p>CMTC</p> <p>AVC</p> <p>NOVA</p> <p>L5/Supplier Excellence Alliance (SEA) – inkind</p> <p>Western Research Applications Center, University of Southern California (WesRAC/USC)</p> | <p>Suppliers and Supply Chain workers</p> <p>Primes</p> <p>Government</p> <p>Supplier Training Providers</p> <p>Economic Development and Workforce Stakeholders</p> | <p>Analyze 2.1 survey results, sharing with SCIAG (Year 2)</p> <p>Develop Maturity Capabilities Model, drawing from expertise of SCIAG (Project 2.1) and survey analysis above (Year 2)</p> <p>Develop common smart supplier requirements and common learning outcomes; disseminating to WIBs, suppliers, supply chain training providers (Year 2)</p> <p>Identify key supplier training resources in Corridor and disseminate training resources matrix (Year 2)</p> <p>Host Supply Chain Transformation Forum #2 (Year 2)</p> <p>Create demonstration project incorporating common learning outcomes (Year 3)</p> <p>Generate computer simulation demonstrating the oscillations of a</p> | <p>Introduction of minimum of 50 suppliers and/or supply chain training providers to smart supplier common learning outcomes derived from Maturity Capabilities Model (MCM – see below)All partners</p> <p>Introduction of minimum of 5 WIBs to smart supplier learning outcomes derived from MCM (see below) CSA</p> <p>Minimum of 100 smart supplier surveys analyzed All partners</p> <p>Development of a Maturity Capabilities Model (MCM) of Common Core Requirements All partners</p> <p>Development of key learning outcomes recommended for inclusion in supply chain training curriculum, with outcomes derived from MCM All partners</p> <p>Analysis of survey developed in Project 2.1, to be used as cornerstone of</p> | <p>Increase in economic impact of suppliers benefiting from training that incorporates smart supplier key learning outcomes derived from CMC</p> <p>An increasing number of training providers adopting key learning outcomes and other elements of the MCM</p> <p>Voluntary increase of supplier network accelerated information flow</p> |

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| | | | <p>negative feedback system in a small supply chain (case study), meant to document value of accelerated information-sharing throughout supply chain network</p> | <p>for MCM All partners</p> <p>Development of and dissemination to 1000 supply chain stakeholders a Training Resource Matrix All partners</p> <p>Hosting of a 2007 Supply Chain Forum to provide information/education regarding Maturity Capabilities Model, key supply chain learning outcomes CSA</p> <p>Strategies for implementing common learning outcomes from three training providers All partners</p> <p>Demonstration project utilizing common learning outcomes with "lessons learned" report CMTC, NOVA, AVC</p> <p>Computer simulation demonstrating the oscillations of a negative feedback system in a small supply chain (case study), meant to document value of accelerated information-sharing throughout supply chain network WESREC</p> <p>Final report incorporating learning outcomes encouraged, sample training strategies to address supply chain transformation All partners</p> | |
| <p>2.3 Smart Supplier Training Resource Outreach Educate 3000 supplier companies about California Innovation Corridor smart supplier training resource providers/potential funding for training</p> | <p>CSA* California Employment Training Panel (ETP – a non-funded WIRED partner)</p> | <p>Suppliers Primes Government and commercial customers of primes/suppliers Economic and workforce development stakeholders</p> | <p>Invite ETP representative to participate in/present at WIRED-related events (Year 1)</p> <p>Facilitate information flow and broker relationships among training funders/training</p> | <p>1000 incumbent employers trained in satellite production (Years 2 and/or 3) Track applicable common measures NOVA</p> <p>82% employment retention of trainees above (Year 3) NOVA</p> | <p>Enhanced skills for 21st century competitiveness through satellite production training</p> <p>Better understanding among training support network (EDOs, WIBs) that supplier training resources and funding are broadly available</p> |

ATTACHMENT 1

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| | | | <p>providers/companies (Year 1 and 2)</p> <p>Design outreach strategy (Year 2)</p> <p>Distribute training resource provider/training funding resource information to 3000 supplier companies (Year 3)</p> | <p>Average earnings of at least \$12,000 over two quarters NOVA</p> <p>Participation of ETP in at least one policymaker education event (Year 1) CSA</p> <p>Participation of ETP in one supplier event each year of performance period (Years 1-3) – interface with Projects 2.1/2.2 CSA</p> <p>ETP smart supplier briefing (Year 1) – interface with Projects 2.1/2.2 CSA</p> <p>Outreach strategy targeting 3000 California suppliers, 50 EDOs, 25 WIBs with “smart supplier” information regarding supplier transformation, training provider resources, training funding support (Year 2) CSA</p> <p>Implementation of outreach strategy, disseminating information regarding supplier transformation, training provider resources, training funding support to 3000 suppliers, 50 EDOs, 25 WIBs (Year 3) Interface with Projects 2.1/2.2/1.1/3.14 CSA</p> <p>A minimum of 3 new training-related partnerships established, with at least one participating WIB CSA</p> | <p>Increased utilization of training resources/funding by Corridor companies, suppliers</p> |
| <p>2.4 Manufacturing Technician Community College Certification Program Development and piloting of an industry-driven community college manufacturing technician</p> | <p>El Camino* (community) College</p> <p>South Bay Workforce Investment Board (Los Angeles area WIB)</p> | <p>Primes Suppliers Economic Development and Workforce programs Other community colleges</p> | <p>Establish Industry Advisory Committee (Year 1)</p> <p>Review assessment instruments (Year 2)</p> <p>Establish curriculum</p> | <p>Training of at least 50 individuals in pilot manufacturing technology technician certification program, with trainees sought from both student and incumbent worker</p> | <p>Replication of Manufacturing Technician Certificate Training program at several California community colleges</p> <p>Increased recruitment of high school students into technical</p> |

ATTACHMENT 1

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| <p>program</p> | | | <p>development team (Year 2)</p> <p>Develop manufacturing technology technician (MTT) curriculum (Year 2)</p> <p>Develop program orientation program for outreach to college, One Stop Career Centers (Year 2)</p> <p>Recruit incumbents, students, others into MTT certification program (Year 2)</p> <p>Conduct pilot training (Year 3)</p> <p>Develop relationships, articulation agreements with local high schools, four year universities (Years 2-3)</p> <p>Evaluate pilot project outcomes, make recommendations (Year 3)</p> | <p>populations. ECC Track applicable common measures. So Bay WIB</p> <p>Track number beginning training, number completing training. So Bay WIB</p> <p>75% retention of training enrollees through completion of program So Bay WIB</p> <p>82% retention of trainees in current employment, with average wage of at least \$12,000 over two quarters So Bay WIB</p> <p>Development of a certificated manufacturing technology curriculum for students and entry level and displaced workers referred through the South Bay WIB (Interface with Projects 2.1, 2.2, 3.5, 3.11) ECC</p> <p>Minimum of two educators trained in delivery of MTTC curriculum ECC</p> <p>Development of a student/trainee retention strategy through ongoing student support services including tutoring, counseling, mentoring and financial aid ECC</p> <p>Industry-driven analysis and validation of accurate workforce assessment instruments for development of sequential certification process in manufacturing (to include instruments of WorkKeys, Manufacturing Skills Standards Certification, National Institute of</p> | <p>training programs at community college level</p> <p>Increased utilization of community college graduates by manufacturing-related corporations and small business</p> |
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ATTACHMENT 1

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| | | | | <p>Manufacturing Skills and Society of Manufacturing Engineers) ECC</p> <p>Development of MTTC orientation program for college, One Stop Career Center counselors/case management personnel ECC</p> <p>Articulation agreement with at least two local high school pre-engineering programs ECC</p> <p>A minimum of 10 organizations (classified as to category – college, corporation, small business) will receive products derived from Project 2.4 ECC</p> | |
| <p>3.1 Workforce Skills Analysis Assessment of 200 high-technology companies to determine regional high-demand occupations/skill needs</p> | <p>CSA*</p> <p>GAVEA</p> <p>Kern EDC</p> <p>LA County WIB</p> <p>LAEDC</p> <p>OCWIB</p> <p>Riverside WIB</p> <p>South Bay WIB</p> <p>San Bernardino WIB</p> <p>SBEDP</p> <p>SLOEVC</p> <p>SLOPIC</p> <p>VCWIB</p> | <p>Workforce Investment Boards and other workforce entities</p> <p>Economic development entities</p> <p>Training providers</p> <p>Higher education</p> <p>High school educators</p> <p>Industry</p> | <p>Team with WIB or economic development partner to identify prospective survey participants (Year 1)</p> <p>Develop project survey tool, reviewing opportunities to better coordinate common skills language (Year 2)</p> <p>Recruit participation in survey by a minimum of 200 targeted companies (Year 2)</p> <p>Compile and analyze survey data (Year 2)</p> <p>Develop strategies to address identified education/training gaps (Year 2)</p> <p>Share strategies across the nine regions and the entire Corridor (Year 2)</p> | <p>Development of survey tool to assess regional high-demand occupations/skill needs CSA (LMID)</p> <p>Distribution of survey to 200 companies All partners</p> <p>Development of regional workforce development and training strategy to meet survey-identified needs All partners</p> <p>Distribution of findings to WIBs throughout Corridor, orientation to minimum of 5 non-project WIBs of training strategy (through Learning Collaboratory in Proj. 3.14) CSA</p> | <p>Ongoing joint activities by WIBs/economic development entities paired for Project 3.1 assessment activity</p> <p>Increase in industry's ability to fill key positions in surveyed companies</p> <p>Increased economic productivity/economic impact in companies surveyed</p> |
| <p>3.2 Industry/University Consortium to Enhance</p> | <p>California Space Education and</p> | <p>University students and professors</p> | <p>Identify forums, conferences and symposia</p> | <p>Development of consortium comprised of</p> | <p>Affordable space access for student and university</p> |

ATTACHMENT 1

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| <p>Global Space Competitiveness Consortium of space science and research, university communities to support affordable space opportunities for small satellite and university payloads, enabling real-world experience for future space workers</p> | <p>Workforce Institute (CSEWI)* CSA</p> | <p>Small business (small satellite builders) Government space stakeholders</p> | <p>currently available which address the affordable space access issue, determining a participation schedule (Year 2)</p> <p>Attend events identified in participation schedule (Years 2 and 3)</p> <p>Establish consortium and a schedule at least three webinars or meetings one in Year 2 and two in Year 3 to discuss obstacles, recommendations, white paper, white paper presentation at target events</p> | <p>representatives of space science and research and university communities, with minimum of three universities represented, three companies represented. (Interface with Project 1.6, 3.3) CSEWI,CSA</p> <p>White paper outlining promising developments and recommendations for enhanced partnering between the space science and research/university communities and industry to foster affordable space opportunities for small satellites and university payloads, as well as opportunities to provide university students critical real-world space experience (linkage with Project 1.6, 3.3) CSEWI,CSA</p> <p>Hosting of a minimum of three moderated dialogues, one in Year 2 and two in Year 3, for discussion of obstacles and recommendations, white paper development and distribution (webinars or face-to-face) CSEWI,CSA</p> <p>List of current small satellite and payload conferences attended jointly by university faculty and students as well as industry, with suggested participation schedule for Project partners CSEWI,CSA</p> <p>White paper dissemination plan describing distribution, possible presentation opportunities CSEWI,CSA</p> | <p>payloads, providing more experiential training for U.S. engineering students entering U.S. workforce, opportunities for more students to launch of their payloads</p> |
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| <p>3.3 Space-Related University Internships and Industry Mentoring</p> | <p>Stanford University*</p> <p>Garvey Spacecraft Corporation</p> <p>CSA</p> | <p>University students</p> <p>Industry</p> <p>Government space stakeholders</p> | <p>Recruit three interns: two for support of student payload launcher development, one for balloon launch program and student assessments (Years 1 and 2)</p> <p>Assign industry mentors (Year 1)</p> <p>Put industry/university program in place (Year 1)</p> <p>Generate launch vehicle development, launch vehicle alteration schedules (Year 1)</p> <p>Perform flight tests on experimental vehicles (Years 2 and 3)</p> <p>Develop balloon launch program (Years 1 and 2)</p> <p>Create concept for distance learning pilot (Year 2)</p> <p>Field distance learning pilot (Years 2 and 3)</p> <p>Host participant webinar, seminar to document internship/mentoring project conclusions (Year 3)</p> <p>Develop procurement practices and policies with student involvement (Year 3)</p> | <p>Development of Stanford student payload internships to include three interns: two undergrads developing payload launchers for student payloads, one graduate research assistant to develop balloon launch program and quarterly student assessments in project 3.10 Stanford</p> <p>Development of university (California State University Long Beach) aerospace student rocket/launch development program featuring minimum of two industry mentors (Garvey Spacecraft Corporation). Project to interface with Stanford student payload internship program above and also Stanford mentoring program in Project 3.10 Garvey</p> <p>Student-supported alteration and flight test of existing experimental launch vehicle to accommodate payload integration for student – developed payloads (Linkage with Projects 1.6, 3.2) Garvey</p> <p>Development and flight of a new experimental launch vehicle with university students playing key roles in all aspects of development (Linkage with Projects 1.6, 3.2) Garvey</p> <p>Development of balloon launch program to carry minimum of 300 miniature student payloads (PongSats) Stanford</p> <p>Distance learning pilot</p> | <p>Mentor-supported university students will bring hands-on, real-world experience to aerospace careers, supporting U.S. global competitiveness</p> <p>An increase in students choosing space-related careers due to elementary and high school exposure to STEM-related hands-on experiences</p> <p>Ongoing industry/university partnerships growing out of positive WIRED project experience</p> |
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| | | | | <p>linking classrooms with launch sites for student experience with launch protocols Stanford</p> <p>Online project review/conferencing webinar among interns, students and external participants to introduce interns/students to webinar, project and teaming protocols Stanford</p> <p>Development of participant seminar to document project conclusions (In conjunction with Project 3.10) Stanford</p> <p>University student-supported development of a set of procurement practices and policies providing student exposure to key industry activity Stanford</p> | |
| <p>3.4 Systems Engineering Outreach Systems engineering outreach, curriculum development and training program</p> | <p>The Aerospace Corporation (TAC)*</p> <p>California Space Education and Workforce Institute (CSEWI)</p> <p>California Polytechnic University, San Luis Obispo (Cal Poly)</p> | <p>Primes</p> <p>Suppliers</p> <p>Government and Commercial Customers of Primes, Suppliers</p> <p>Universities</p> <p>Economic and Workforce Development Organizations</p> | <p>Assess systems engineering needs through survey to companies requiring systems engineering professionals or skills (Year 1)</p> <p>Develop pilot systems engineering orientation and survey course "Elements of Systems Engineering" (Year 2)</p> <p>Train instructors in delivery of pilot (Year 2)</p> <p>Deliver orientation and systems engineering survey course to 20 recruited incumbent workers/students; evaluate (Year 2)</p> <p>Interview target companies regarding systems</p> | <p>Instruction of 20 incumbent engineers through pilot systems engineering course described below CalPoly, TAC</p> <p>Delivery of piloted course to 80 incumbent engineers. Track applicable common measures CalPoly, TAC</p> <p>82% employment retention with a minimum salary of \$12,000 for two quarters for 80 incumbent engineers trained SLOPIC?</p> <p>Training of minimum of two instructors in delivery of pilot course CalPoly, TAC</p> <p>Development of two-day systems engineering survey course "Elements of Systems Engineering; will</p> | <p>A more competitive U.S. engineering skills base, founded on understanding of relationships among various engineering disciplines</p> <p>Increased utilization of systems engineering training provider resources by companies and individuals</p> <p>Fewer technical integration issues/production issues in companies benefiting from systems engineering training</p> <p>Greater visibility for and understanding of importance of systems engineering to 21st century technology development, design and production</p> |

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| | | | <p>engineering needs/current solutions (Year 2)</p> <p>Refine curriculum of pilot course according to recommendations in evaluation (Year 3)</p> <p>Train minimum of two new instructors in delivery of refined curriculum (Year 3)</p> <p>Deliver refined curriculum to 80 incumbent workers recruited from industry (Year 3)</p> <p>Disseminate training provider information to minimum of 100 systems engineering stakeholders (Year 3)</p> | <p>include additional orientation day CalPoly, TAC</p> <p>Development of online systems engineering courses within the Corridor to address identified skills gap CalPoly, TAC</p> <p>Online needs assessment (survey) for companies, government agencies requiring systems engineers, systems engineering skills (Interface with project 3.1, 3.5) CalPoly, TAC, CSEWI</p> <p>Minimum of 15 interviews with companies and ADD - academic institutions hiring systems engineers or for systems engineering skills (Interface with project 3.1, 3.5) CalPoly, TAC</p> <p>Identification of 10 systems engineering content providers (Interface with Project 2.1, 2.2) CalPoly, TAC</p> <p>Distribution of systems engineering training provider catalogue to minimum of 100 systems engineering stakeholder organizations (companies, associations, etc.) (Interface with Project 3.14) CalPoly, TAC, CSEWI</p> | |
| <p>3.5 Science, Technology, Engineering and Math Collaborative Action Plan (STEMCAP) Develop a collaboration and strategic action plan to increase the number of STEM students, teachers, professors and mentors in the California Innovation Corridor and</p> | <p>CSEWI*</p> <p>CCST</p> <p>Cal Poly, San Luis Obispo</p> <p>Strategic Vitality, LLC</p> <p>El Camino College</p> | <p>Industry and small business</p> <p>STEM-related university disciplines seeking increased enrollment</p> <p>Schools recruiting and attempting to retain</p> | <p>Establish Steering Committee (Year 1)</p> <p>Host two STEMCAP-related fora (Year 1)</p> <p>Contract with primary STEMCAP development contractor (Year 2)</p> | <p>Establishment of STEMCAP Steering Committee drawn from industry, education, workforce and informal science All partners - completed</p> <p>Establishment of minimum of three STEMCAP working</p> | <p>Adequate pool of 21st Century STEM-related workers to ensure U.S. global competitiveness</p> <p>An increase in the number of students entering and graduating from STEM university disciplines</p> |

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| <p>statewide</p> | <p>Inkind participation by key public education policymakers and practitioners, major California education systems, private industry and the informal science community</p> | <p>STEM teachers STEM stakeholders statewide</p> | <p>Host third STEMCAP forum (Year 2)</p> <p>Form advisory group and coordinate minimum of three targeted stakeholder focus group meetings (Year 2)</p> <p>Perform environmental scan of key existing STEM-related reports/studies (Year 2)</p> <p>Characterize role of industry and informal science community, enhancements to teacher training/professional development (Year 2)</p> <p>Provide STEM and education-related inputs to Projects 1.1 and 1.7 (Year 2)</p> <p>Produce draft of STEMCAP for Steering Committee review (Q1/Year 3)</p> <p>Implement dissemination plan (Year 3) Coordinate STEMCAP-related pilots in three regional collaboratives (Year 3)</p> | <p>groups All partners completed: Recruitment/retention of STEM students/Educators; Industry-Relevant Curriculum Development; Seamless STEM Transitioning All partners completed</p> <p>Convening of minimum of three broad-based forums of STEM stakeholders (industry, K-12, community college, university, informal science – minimum of 40 attendees each) to support content development for the STEMCAP All partners completed</p> <p>Case study to assess program benefit to technical student recruitment (client population): Project Lead the Way (PLTW) as a STEM best practice, based on El Camino College's monitoring of PLTW programs at four Los Angeles-area high schools Development of advisory group to provide feedback to target stakeholder focus groups All partners</p> <p>STEMCAP insights garnered from a minimum of three targeted stakeholder focus groups, in addition to working groups mentioned above All partners completed</p> <p>Summary of minimum of three STEM-related reports/studies to provide environmental scan content - CCST</p> <p>Role of teacher training, industry and informal</p> | <p>An increase in the number and quality of STEM-related teachers and professors</p> <p>Better alignment of STEM strategies across all sectors of industry, informal science and education communities</p> <p>More strategic investment in STEM as a result of identification of STEM best practices and model programs</p> |
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| | | | | <p>science articulated as part of STEMCAP All partners</p> <p>Identification/description of minimum of three STEM-related teacher professional development summer or retreat programs All partners</p> <p>Inputs from minimum of 150 STEM stakeholders All partners</p> <p>Minimum of two WIRED integration dialogues with Project 1.1 and 1.7 partners All partners</p> <p>STEM Collaborative Action Plan featuring recommendations, best/promising practices and model programs, dissemination plan (Linkage with Projects 3.3, 3.6, 3.8, 3.9, 3.10, 3.12 and others)CSEWI</p> <p>STEMCAP-related presentations at minimum of 10 education, workforce and/or economic development conferences, events All partners</p> <p>Pilot minimum of three STEMCAP-related initiatives in regional collaboratives CSEWI</p> | |
| <p>3.6 MESA Teacher Training Academies Initiate summer institutes for teacher professional development in STEM</p> | <p>Math, Engineering and Science Achievement (MESA) Program* - contract pending</p> | <p>California teachers</p> <p>California students</p> <p>Parents</p> <p>Schools</p> <p>Industry</p> | <p>Generate teacher institute schedules (Year 2)</p> <p>Develop curriculum (Year 2)</p> <p>Coordinate institute logistics (Years 2 and 3)</p> <p>Recruit teacher enrollees</p> | <p>Establishment of 6 summer teacher institutes (academies) providing instruction in STEM-related teaching strategies (linkage with 3.5 and other projects) MESA</p> <p>Minimum total of 150 teachers trained in six</p> | <p>24,000 students positively impacted annually (150 teachersx32studentsx5classes)</p> |

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| | | | (Years 2 and 3) Develop evaluation element for final report (Year 3) | summer institutes MESA Institute syllabus MESA Institute curriculum MESA Include program evaluation element in final report, detailing program successes and lessons learned MESA | |
| 3.7 Certificated Software Development Training Program Training program for unemployed software developers and others interested in software development training for positions in aerospace and defense | NOVA* (University of California, Santa Cruz Extension – Subcontractor) | Aero, space and defense companies Individuals Aerospace and defense industry Community colleges Economic Development organizations Workforce organizations | Convene industry/stakeholder Advisory Group to identify skill needs, review training strategy, curriculum (Year 1) Develop proposed “Software Development for Aerospace/Defense Applications” curriculum to be delivered through US Santa Cruz Extension (Year 1) Submit curriculum for University of California certificate approval (Year 2) Recruit trainees to pilot curriculum (Year 2) Conduct pilot training (Years 2 and/or 3) Support placement of trainees (Years 2 and/or 3) Develop curriculum outline to foster replication Corridor-wide (Year 3) | Training program piloting certificate curriculum to include minimum of 15 unemployed, underemployed or dislocated workers. Track applicable common measures. NOVA 76% of trainees to be placed in training-related positions . NOVA 82% of trainees placed will be retained in positions paying at least a \$12,000 average wage for two quarters. NOVA 80% of training enrollees receive Certificate in “Software Development for Aerospace/Defense Applications” . NOVA Track number of students beginning training, number of students completing training. . NOVA Skills needs identification for software engineers transition to aerospace/defense applications (Interface with Project 3.1) . NOVA Development of curriculum for certificate to train software engineers to transition to aerospace/defense | Enhanced mobility of software developers industry to industry More rapid filling of software developer positions within the aerospace and defense sector in the Corridor Better understanding of training needs of individuals moving from IT to aerospace/defense |

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| | | | | <p>applications. NOVA</p> <p>University-approved certificate program for "Software Development for Aerospace/Defense Applications". NOVA</p> <p>Development of curriculum outline to foster expansion of similar certificate programs statewide. NOVA</p> <p>Minimum of three new partnerships among workforce, education system and the private sector (Interface with Project 1.7, 3.14) . NOVA</p> | |
| <p>3.8 Student Advisor/Counselor Space Career Orientation Program Orient university student advisors, counselors about the opportunities and benefits of space-related STEM careers</p> | <p>CSEWI* CSA/New Space Professionals Working Group (NSPWG)</p> | <p>Employers</p> <p>Future STEM career workers/University students in STEM disciplines</p> <p>High technology stakeholders: workforce and economic development entities</p> | <p>Define project (Year 1)</p> <p>Identify of at least three target universities (Year 2)</p> <p>Identify of key student undergraduate advisors/counselors in each university (Year 2)</p> <p>Recruit new graduates for advisory panel (Year 2)</p> <p>Research, develop and publish outreach materials (Year 2)</p> <p>Outreach to prospective university undergraduate advisors/counselors (Years 2 and 3)</p> <p>Host orientation session (Year 3)</p> <p>Generate case studies on orientation effort at three universities (Year 3)</p> | <p>Recruitment of new graduate advisory pane CSEWI, CSA/NSPWG</p> <p>Development of three program models (to align with three target universities) to orient undergraduate advisors/counselors with space-related STEM careers (linkage with Project 3.5) CSEWI, CSA/NSPWG</p> <p>Development of orientation session featuring high-tech career discussion for target university student advisors/ counselors CSEWI, CSA/NSPWG</p> <p>Development of outreach materials on space-related STEM careers CSEWI, CSA/NSPWG</p> <p>Element of final report to include implementation case studies of three program models, detailing obstacles, solutions, successes and lessons CSEWI, NSPWG learned</p> | <p>An increase in the number of university students entering STEM-related space careers</p> <p>More strategic cooperation of target universities with space industry employers/recruiters</p> <p>Expansion of undergraduate student advisor/counselor orientation program to other universities</p> |

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| <p>3.9 Troops to Teachers Accelerated Credentialing Initiative for Science and Math Teacher Recruitment Accelerated credentialing program targeting recruitment of math/science teachers for California elementary and high schools</p> | <p>Project Pipeline /California Troops to Teachers* CSEWI</p> | | <p>Develop math and science teacher recruitment outreach materials (Year 1)</p> <p>Develop outreach schedule (Year 1)</p> <p>Implement outreach schedule (Year 2)</p> <p>Counsel teacher recruitment prospects (Years 2 and 3)</p> <p>Recruit prospects into advanced counseling, testing (Years 2 and 3)</p> <p>Find placement options for teacher recruits (Years 2 and 3)</p> | <p>Minimum of 70 people will be recruited for Troops to Teachers pre-program counseling Troops</p> <p>Minimum of 25 people will participate in required credentialing testing Troops</p> <p>Minimum of 80% of those participating in required credentialing testing will successfully complete requirements for intern placement Troops</p> <p>Minimum of five presentations to employer groups housing potential teacher recruits from retiree pool Troops</p> <p>Participation in targeted outreach at minimum of five events identified as prospective teacher recruitment opportunities Troops</p> <p>Development of teacher recruitment outreach schedule Troops</p> <p>Development of teacher recruitment outreach materials Troops</p> | <p>An increased pool of qualified math and science teachers with real-world employer experience</p> |
| <p>3.10 Development of University and High School Mentoring Program Pilot one elementary and one high school mentoring program based on the Stanford University model of using industry mentor recruits on multi-year mentoring assignment</p> | | | <p>Define project (Year 1)</p> <p>Recruit industry/employer mentors (Years 1 and 2)</p> <p>Develop elementary program (Years 1 and 2)</p> <p>Develop high school program (Years 1 and 2)</p> <p>Recruit elementary and high school mentoring program participants (Year 2)</p> <p>Establish employer</p> | <p>500 elementary students will participate in the PongSat balloon launch, receiving instruction though mentor recruited from STEM-related employer base Stanford</p> <p>Minimum of 250 elementary students receiving instruction will be drawn from Latino community Stanford</p> <p>Minimum of 12 high school students receiving</p> | <p>Sustainability of mentoring program through established relationships between employers and schools</p> <p>Expansion of mentoring program through use of student and teacher mentoring program guidelines and sharing of mentoring program success</p> |

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| | | | <p>relationships regarding ongoing mentoring program support (Year 2)</p> <p>Instruct teachers in mentoring program success factors (Year 2)</p> <p>Implement mentoring program (Years 2 and 3)</p> <p>Administer pre and post quarterly student assessments (Years 2 and 3)</p> <p>Create online tools (Years 2 and 3)</p> <p>Perform online project assessment through webinar for participants (Year 3)</p> <p>Coordinate participant seminar to share conclusions (Year 3)</p> <p>Draft project review element for final report (Year 3)</p> | <p>instruction through project mentor drawn from industry Stanford</p> <p>One elementary school mentoring program developed Stanford</p> <p>One high school mentoring program developed serving approximately 20 students Stanford</p> <p>Recruitment of at least 6 industry engineers for student mentoring Stanford, CSEWI</p> <p>Relationships established with minimum of 6 employers regarding mentoring sustainability Stanford, CSEWI</p> <p>Recruitment of at least one elementary school, one high school, minimum of five teachers total to support mentoring program Stanford, CSEWI</p> <p>Instruction of minimum of five teachers in success factors of mentoring programs Stanford,</p> <p>Development of pre and post quarterly student assessment for elementary students administered annually (development to be accomplished with graduate student from Project 3.3) Stanford,</p> <p>Creation of set of online tools to support mentoring activities Stanford,</p> <p>Online project review and conferencing webinar among interns, students</p> | |
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| | | | | <p>and external participants to introduce interns/students to webinar, project and teaming protocols (linkage with Project 3.3) Stanford,</p> <p>Development of participant seminar to document project conclusions (In conjunction with Project 3.3) Stanford,</p> <p>School and teacher mentoring program guidelines to be included as element of final report Stanford,</p> | |
| <p>3.11 Community College Mechatronics Degree Program/ Technical Certification Outreach to High Schools Pilot community college industrial technology-based degrees in mechatronics in coordination with demonstration project providing case studies of various outreach strategies</p> | <p>Allan Hancock College (AHC)*</p> <p>Cerritos College</p> <p>College of the Canyons</p> <p>Lancaster University Center</p> <p>CSEWI</p> | <p>Industry needing mechatronics skills</p> <p>Future technology workers currently studying in community colleges</p> <p>Economic and workforce development organizations</p> | <p>Convene industry advisory group for technical support (Year 1)</p> <p>Develop mechatronics curriculum (Year 1)</p> <p>Integrate mechatronics curriculum with Engineering Technology and Electronics Technology curricula; submit to Chancellor for State approval of AA degrees: Engineering Technology/Emphasis in Mechatronics, Electronics Technology/Emphasis in Mechatronics (Years 1-2)</p> <p>Develop outreach strategies for high school student recruitment into technical community college or university coursework (Year 1)</p> <p>Design outreach materials; disseminate materials to high schools in appropriate community college, university center jurisdictions (Year 2)</p> <p>Conduct outreach activities, evaluate and develop</p> | <p>Piloting of mechatronics coursework developed as curriculum for mechatronics degree programs described below: 100 unduplicated students served in mechanical core courseworkAHC</p> <p>70% completion rate for students taking mechatronics coursework AHC</p> <p>DELETE- Minimum of 50% of mechatronics students from traditionally under-served populations (e.g. Latino, etc.) AHC</p> <p>DELETEEmployment retention of mechatronics students of at least 82% with an average wage of at least \$12,000 for 2 quarters AHC</p> <p>Development of new community college AA degree for Engineering Technology/Emphasis in Mechatronics (Interface with Project 3.1, 3.5) AHC</p> <p>Development of new AA</p> | <p>Industry benefiting from highly qualified mechatronics-trained skilled workers</p> <p>Greater awareness of mechatronics as a career pathway</p> <p>More students entering engineering and mechatronics-related disciplines</p> <p>More students entering engineering and other STEM-related careers</p> <p>Numerous community colleges offering mechatronics degree program</p> <p>Better understanding of community college training providers of interfaces, differences/similarities among mechatronics, electronics, engineering technology, role of IT and robotics in engineering setting</p> |

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| | | | <p>replication protocols to share with other community college, education center stakeholders (Years 2/3)</p> | <p>degree for Electronics Technology/Emphasis in Mechatronics (interface with Project 3.1, 3.5) AHC</p> <p>Development of Mechatronics curriculum to support new AA degrees described above (Interface with 3.5) AHC</p> <p>Community College Chancellor's Office approval for AA degrees described above AHC</p> <p>Minimum of 100 junior high school students participating in STEM course-related outreach activities at College of the Canyons (Interface with 3.5) COC</p> <p>Minimum of 100 high school students participating in STEM curriculum and career outreach activities course-related outreach activities at Cerritos College (Interface with 3.5) Cerritos</p> <p>Minimum of 300 K-14 students participating in STEM curriculum and career outreach activities in the Allan Hancock College service area (Interface with 3.5) AHC</p> <p>Minimum of 50 high school students participating in STEM course-related outreach activities at Lancaster University Center (Interface with 3.5) LUC</p> <p>Replication protocols for STEM-related community college outreach programs described in final report</p> | |
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| | | | | (interface with Project 2.4) All partners Replication protocols shared with minimum of six other community colleges (Interface with Project 2.4) All partners | |
| <p>3.12 <i>Development of Science Educator Launch Conferences and Earth Science Curriculum</i> Development of earth science curriculum articulating with at least one university system for use by California high schools; development of science educator launch conferences to provide teacher professional development utilizing real-world, relevant space-related STEM training to K-12 teachers</p> | Space Information Laboratories (SIL, parent of Endeavour Center) | <p>Science and elementary school teachers</p> <p>Students</p> <p>School Districts</p> <p>Industry</p> | <p>Identify potential Educator Launch Conference opportunities based on NASA mission launch schedule (Year 1)</p> <p>Recruit NASA mission chiefs, Subject Matter Experts (SMEs) for initial Educator Launch Conference; recruit teacher participants; coordinate lodging, meal, tour and program logistics; host initial Educator Launch Conference providing classroom activities for teachers recruited for professional development opportunity (Year 1)</p> <p>Host additional Educator Launch Conference (Years 2 and 3)</p> <p>Develop earth/science curriculum in cooperation with JPL, other stakeholders, ensuring articulation with University of California (Years 2 and 3)</p> | <p>Development of earth science curriculum articulating with at least one university system for use by California high schools SIL</p> <p>Minimum of 150 teachers instructed in STEM-related professional development supported by classroom activities through the SIL (Endeavour Center) Educator Launch Conferences planned to coincide with actual NASA missions launched at Vandenberg AFB SIL</p> <p>California Science Teachers Association engaged as distribution channel for earth science curriculum SIL</p> <p>Jet Propulsion Laboratory engaged as curriculum development partner SIL</p> | <p>24,000 students impacted through classroom efforts of teachers participating in Educator Launch Conferences</p> <p>Potentially impact all California students through adoption of earth science curriculum in California schools</p> |
| <p>3.13 <i>Virtual California Space Center</i> Creation of a participatory web-based space learning center (collaboratory) that sponsors and features content of real-world space-related education and STEM outreach programs</p> | <p>CSEWI*</p> <p>CSA</p> <p>Inkind: California Space Center</p> <p>NASA Centennial Challenge Office</p> | <p>K-University students</p> <p>K-University teachers</p> <p>Parents</p> <p>Entrepreneurs and innovation-oriented companies</p> | <p>Develop three internship programs to support virtual space education learning site and eventual physical California Space Center (Years 2 and 3)</p> <p>Research and identify target audiences for web-</p> | <p>Development of three internships in support of the virtual California Space Education Center and the eventual physical California Space Center: one historical research internship, one environmental research</p> | <p>A larger STEM and space workforce pool</p> <p>A sustainable "one stop" virtual learning site for space-related education in California as well as supporting STEM education, potentially impacting thousands of students a year through</p> |

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| | Zero South organization | General public | <p>based learning center (Year 2)</p> <p>Develop outreach campaign to educate target audiences about web-based learning center and its real-world programs (Year 2)</p> <p>Determine design and hosting protocols for development of virtual space education center (Year 2)</p> <p>Establish internal CSA/CSEWI infrastructure to support content review, approval and technical updating of the virtual learning site (Year 2)</p> <p>Determine and establish educational partnerships critical to content relevance, virtual learning center's online success (Year 2)</p> <p>Coordinate with Zero South and Centennial Challenge programs to bring their outreach content online (Year 2)</p> <p>Explore with WIRED partners which elements of Projects 3.5, 3.11, 3.12 and others might benefit from outreach opportunity provided by virtual California Space Education Center (Year 2)</p> <p>Develop and launch virtual California Space Education Center learning site, ensuring effective navigation of the web-based tool, continuing enhancement to site (Years 2 and 3)</p> | <p>internship, one additional internship TBD CSA, CSEWI</p> <p>Development of web-based "California Space Education Center" , a virtual learning center and outreach platform for student, teacher, education stakeholder outreach supporting space and STEM-related learning and careers CSEWI</p> <p>Attraction of minimum of 500 students to Zero South project outreach, 150 students to NASA Centennial Challenge information, inspiring study of STEM disciplines for STEM careers CSEWI</p> <p>Live coverage of Zero South expedition on new site CSEWI</p> <p>Creation of online element showing typical "consecutive steps" to a STEM career, featuring sample STEM career ladders CSEWI</p> <p>Attraction of 15 educational exhibits as part of outreach to minimum of 400 attendees of NASA Centennial Challenges even CSA</p> <p>Recruitment of 5 inspirational STEM career professionals to speak at NASA Centennial Challenges event, inspiring students to study STEM disciplines in preparation for STEM careers CSEWI</p> <p>Attraction of 150 students</p> | <p>teacher and curriculum support</p> <p>Ongoing attraction of students into STEM disciplines, graduates into STEM and especially space careers</p> <p>Follow-up of teacher professional development with year-round classroom support, distance learning opportunities, student exposure to SMEs, etc.</p> |
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| | | | <p>Coordinate live coverage of Zero South Expedition on virtual education site</p> | <p>to NASA Challenges, exposing them to STEM education/career opportunities, to robotics teams competing and to STEM career professionals CSEWI</p> <p>Introduction of a minimum of 20 STEM stakeholder organizations to online "California Space Education Center" and its current attractions: Zero South project participation and NASA Centennial Challenges CSEWI</p> <p>Attraction of a minimum of 20 K-12 teachers to online California Space Education Center to review potential classroom earth science lessons (Linkage with Project 3.12) CSEWI</p> | |
| <p>3.14 Workforce Investment Board (WIB) Learning Collaboratory A set of activities designed to accelerate WIB understanding and addressing of the 21st Century innovation-entrepreneurship environment and its impact on workforce skills and needs, resulting in a more effective Corridor-wide approach to development of a globally competitive U.S. workforce</p> | <p>CWA*</p> <p>CSA</p> | <p>California workers</p> <p>Industry</p> <p>WIBs</p> <p>Economic development stakeholders</p> | <p>Develop and administer to WIBs a pre-survey to enable benchmarking and tracking of transformative activities (Year 1)</p> <p>Coordinate program and logistics for two conferences, one WIB Chairs meeting, one Community College meeting and one One Stop meetings (Year 1)</p> <p>Coordinate program and logistics for three conferences, one WIB Chairs meeting, one Community College meeting and two One Stop meetings (Year 2)</p> <p>Coordinate program and logistics for two conferences and one One Stop meeting (Year 3)</p> | <p>Development and administering of pre and post surveys of WIBs to benchmark and track transformative activities. Survey distribution to all 50 WIBs; a minimum of 30 responses in each pre and post effort, with predominant focus on the 23 WIBs in the Corridor CWA</p> <p>Development and promotion of a self-assessment tool for local WIBs, informed by the Council on Competitiveness' monograph on "Measuring Regional Innovation" CWA</p> <p>Sponsoring of a minimum of seven conferences and a minimum of six regional meetings (WIB Chairs (2),</p> | <p>Workforce development and training strategies and priorities in Corridor and California WIBs is aligned with today's need for a demand-driven system responding to an innovation-oriented, globally competitive marketplace seeking workers with 21st Century skills</p> |

ATTACHMENT 1

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| | | | <p>Develop two web-based trainings: innovative workforce and economic development; innovative approaches for building partnership investment in demand-driven training</p> <p>Identify 10 existing and emerging innovative practices among workforce, economic development and education practitioners for providing workforce and training services related to demand-driven STEM worker needs</p> <p>Develop and publish five white papers, one each for:</p> <ul style="list-style-type: none"> • WIB Chairs • Youth workforce practitioners • Elected officials • One-Stop communities • Economic and Business Service professionals | <p>Community Colleges (2), One-Stop Operators (4) to gather and disseminate best practice information and improve communication among partners CWA</p> <p>Development of web-based trainings on new and innovative workforce and economic development strategies and on innovative approaches for building partnership investment in demand-driven training CWA</p> <p>Identification of 10 existing and emerging innovative practices among workforce, economic development and education practitioners for providing workforce and training services in response to businesses with existing and future needs for workers with STEM skills CWA</p> <p>Publishing of five white papers targeted to key strategic audiences including WIB Chairs, youth workforce practitioners, elected officials, one-stop communities and economic development and business service professionals. Included will be (1) targeted to youth practitioners: STEM Opportunities and the Workforce Pipeline (2) for business services professionals: Integrated Workforce, Education and the Economic Development Strategies (3) for workforce development and economic development community at large: Best Practices for Building Communities with</p> | |
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| | | | | a Competitive Workforce Advantage (4) Leveraging Resources (5) WIRED Success Stories (linkage with Project 1.1 Economic Development Innovation Model, 1.5 and 1.7 WIB Toolkit) CWA | |
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