

RESOLUTION

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF EL PASO:

THAT the City Manager is authorized to enter into an Interlocal Agreement between The University of Texas at El Paso ("University") and City of El Paso ("City") by and through their duly authorized officials, pursuant to the Interlocal Cooperation Act, Article 79.001 *et seq.*, Texas Government Code, for a three (3) year term, whereby the University will, in accordance with the grant it received under the Economic Development Administration's Build to Scale Program provide all program personnel, perform all grant administration, and, via the El Paso Makes consortium, establish and operate an Aerospace and Defense Supply Chain Innovation Network to support growth of El Paso's small and medium aerospace and defense supply chain enterprises; for which the City will pay the University an amount not to exceed \$500,000.00 per year for a maximum compensation not to exceed \$1,500,000.00 over the three year term to serve as a match for the \$1,500,000.00 award granted to the University by the Economic Development Agency's Build to Scale program. A copy of this agreement is attached hereto as Exhibit "A."

ADOPTED this 15th day of February, 2022

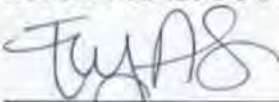
THE CITY OF EL PASO


Oscar Leeser,
Mayor


ATTEST:


Laura D. Prine
City Clerk

APPROVED AS TO FORM:


Evy Sotelo
Assistant City Attorney

APPROVED AS TO CONTENT:


Elizabeth Triggs
Interim Director, Economic and
International Development

STATE OF TEXAS	§	INTERLOCAL AGREEMENT FOR
	§	EL PASO MAKES: AEROSPACE AND
COUNTY OF EL PASO	§	DEFENSE SUPPLY CHAIN INNOVATION
		NETWORK FOR MANUFACTURERS

This Agreement is entered into by and between the **City of El Paso, Texas**, a Texas municipal corporation (“**City**”), and **The University of Texas at El Paso** (“**University**”) Texas State Agency, Texas Public Institution of Higher Education and member institution of The University of Texas System, by and through their duly authorized officials, pursuant to the Interlocal Cooperation Act, Article 79.001 *et seq.*, Texas Government Code.

RECITALS

WHEREAS, the University and the City are local governments as defined in Chapter 791 of the Texas Government Code, and have the authority to enter into this agreement, and have each entered into this agreement in the appropriate manner prescribed by law;

WHEREAS, on 10/05/2021 the parties were informed of an award from EDA Award Number ED21HDQ0240103 (“**Program**”);

WHEREAS, the University and the City specify that each party paying for the performance of said functions of government shall make those payments from current revenues available to the paying party;

WHEREAS, University has available Personnel to effectuate the Program;

WHEREAS, the Parties wish to establish interagency cooperation arising from the City and University desire to participate in the development and completion of the Aerospace and Defense Supply Chain Innovation Network for Manufacturers Program;

WHEREAS, the City and the University believe that the cooperative agreement to create the Aerospace and Defense Supply Chain Innovation Network for Manufacturers, will support rapid growth of our small and medium enterprises. The Innovation Network will enhance the innovation and business capabilities of El Paso’s existing manufacturing sector and connect them to the national aerospace and defense value chain. El Paso Makes led by the University of Texas at El Paso’s Aerospace Center (cSETR) and W.M. Keck Center for 3D Innovation, the El Paso Chamber, and the City of El Paso will leverage the national research preeminence at UTEP to strengthen the competitiveness of El Paso’s manufacturing sector. in effectuating the Program is adequate consideration to support this Interlocal Agreement;

NOW THEREFORE, in consideration of the mutual contributions described herein and the mutual covenants and undertakings of the parties, the receipt and sufficiency is hereby acknowledged, the City and the University agree as follows:

I. OBLIGATIONS OF BOTH THE CITY AND UNIVERSITY

- A. Designated Liaisons. Each party will assign a responsible liaison and point of contact (“POC”) to coordinate, oversee and facilitate the implementation of the Program.

The parties hereby designate the following POC under this Agreement:

For University:
Technical POC:
Dr. Ahsan Choudhuri, Professor
ahsan@utep.edu

For Department:
Anne M. Guayante
Grants & Strategic Initiatives Manager

Administrative POC:
Raul Chavez, Research Administrator
rchavez13@utep.edu

- B. The parties will consult with each other and coordinate with their respective POCs to determine available University Personnel capacity.
- C. City will provide grant matching funds, in an amount not to exceed \$1,500,000, in quarterly installments over a three (3) year period beginning October 1, 2021 and ending September 30, 2024, and all other items necessary for the development and completion of the Aerospace and Defense Supply Chain Innovation Network for Manufacturers effort specified in the Program Agreement.
- D. Subject to receipt of the invoice and substantiating documentation as required under this Agreement and applicable law and regulation, City will reimburse University for the services by University to City in accordance with Exhibit “A” attached hereto and incorporated herein by reference. The parties expressly agree that any change in Personnel or additional Personnel will require the establishment of an individual rate per person assigned and incorporation in Exhibit B of this Agreement through an amendment of the Agreement.

- i) To receive reimbursement, University must submit an invoice to City providing a description of the services performed and expenses incurred.
- ii) University will submit an invoice on a quarterly basis. University will submit the invoice to the following address:

EDCompliance@elpasotexas.gov

- iii) After review and approval of the invoice submitted by University, City will remit reimbursement to University at the following address:

The University of Texas at El Paso
Office of Contracts & Grants Accounting Services
Administration Building, Room 200
500 W University
El Paso, Texas 79968-0697

- iv) City agrees to remit reimbursement to University no later than thirty (30) calendar days after City's receipt of the invoice.
- v) In no event shall the total amount paid by City under this Agreement exceed \$500,000.00 per twelve month period, or \$1,500,000.00 over the term of this Agreement.

II. OBLIGATIONS OF UNIVERSITY

- A. During the term of this Agreement, University will furnish City with invoices every three (3) months for expenses to be reimbursed through the matching funds referenced in paragraph I:C of this agreement; fully execute all grant activities; and provide the City with a booth at each of the three (3) annual supplier summits referenced in the Project Narrative on p. 9, Section 5.
- B. The University shall agree to furnish to the City the following:
 - a. The names and contact information of the seventy (70) companies referenced in the Project Narrative beginning on p. 7, Section 3C;
 - b. Information concerning the technical capabilities of said companies referenced in that same section of the Project Narrative;
 - c. Access to the supplier database referenced in p.8, Section 3A of the Project Narrative, and permission to export data from that database.
- C. In exchange for the City providing a total of \$1,500,000.00 between October 1, 2021 and September 30, 2024, the University, at no cost beyond what is detailed herein and in the Program Agreements, is providing all grant activities and reporting for the benefit of the City clientele and the community as a whole.
- D. The University shall be responsible for assigning University Personnel and paying its Personnel salary and benefits in accordance with University policy, rules and regulations.
- E. During the term of this Agreement and their assignment to City, Personnel will remain at all times employees of University. University shall be responsible for the salary and benefits of Personnel as applicable to employees of University, and shall withhold and transmit payroll taxes, provide unemployment insurance, and workers' compensation benefits as well as process unemployment and workers' compensation claims involving Personnel. For no purposes will Personnel be considered an employee of City.
- F. El Paso Makes (a consortium led by the applicant, University of Texas at El Paso's Aerospace Center (cSETR) and W.M. Keck Center for 3D Innovation, and the El Paso Chamber) agrees that:
 - a. By August 2024, seventy (70) local manufacturers will be participating in the Innovation Network;
 - b. By August 2024, the Innovation Network will market and connect to the national aerospace and defense industrial base seventy (70) local manufacturers;

- c. By August 2024, the Innovation Network will host three (3) annual supplier summits and the City will have a booth at each summit;
- d. By August 2024, the Innovation Network will organize twelve (12) trips to market El Paso suppliers to the aerospace and defense industry and the City will be invited to be part of this travel;
- e. By August 2024, the Innovation Network will provide customized services to increase the innovation, business and technical capabilities of seventy (70) local manufacturers;
- f. By August 2024, the Innovation Network will ensure that sixty (60) of our local manufacturers have been quality certified to compete for aerospace and defense business.
- g. By August 2024, the Innovation Network will ensure that sixty (60) of local manufacturers are prepared to successfully compete for DoD and NASA contracts.
- h. By August 2024, the combined annual revenue of manufacturers receiving services and support from the Innovation Network will increase by 10%.
- i. By August 2024, manufacturers receiving services and support from the Innovation Network will collectively add 200 new jobs to the El Paso economy.

III. OTHER COVENANTS AND AGREEMENTS

- A. Transfer of Ownership Interest. This Interlocal Agreement represents an agreement for the City and University to share resources. Neither party shall acquire an interest in the real or personal property of the other.
- B. Retention of Ownership. Upon termination of this Agreement, in accordance with section V, each party will retain ownership of its respective properties, equipment and related supplies, whether or not the property was previously shared, and all Personnel will return to work at University to their regular appointments and assignments.
- C. Responsibility for Third Party Contracts. If either party enters into a license, lease, lease/purchase agreement for services, equipment or software, the signing party shall remain responsible for all payments and interaction with the vendor. No contribution will be required from the non-signing entity unless otherwise agreed.
- D. Insurance. Each entity may insure its own property, and neither party shall be liable for loss or damage to the real or personal property, personal injury, or any other special, indirect and/or consequential damages of any kind of the other arising from this Agreement. UTEP is a self-insured institution.
- E. No Conveyance of Real or Personal Property Interests. Both parties agree this Interlocal Agreement is not intended to form an interest in real property and neither the City nor the University will acquire rights of tenancy in the other's facility for the initial term of this Agreement or during any renewal, extensions or modifications of the term of the Agreement.

- F. Stand Alone Agreement. The terms of this Agreement will be considered separate from any other University/City transaction or agreement. The mutual consideration of the Parties described herein shall be calculated without reference to any other contract. Setoffs against other contractual obligations is neither contemplated by the parties nor permitted.

IV. INITIAL TERM AND RENEWAL

- A. Term and Automatic Renewal. This effective date of this Agreement is the date this Interlocal Agreement is approved by the El Paso City Council ("Effective Date"). The University's responsibility under this Agreement to assign Personnel and services as established herein will commence on the Effective Date ("Commencement Date"). Thereafter, this Agreement shall be in effect for three (3) years beginning on the Effective Date, unless terminated by either party in writing signed by duly authorized representatives of each of the parties in accordance with the same provisions set in this Agreement.

V. TERMINATION

- A. Termination for Convenience. Either party may terminate this Agreement for any reason by sending a written notice to the non-terminating party at least fifteen (15) calendar days before termination. All parties providing work under this Agreement will halt all work when the termination notice sent by the terminating party is received by the non-terminating party.
- B. Termination by Either Party for Cause. Either party may terminate this Agreement if one party fails to fulfill the obligations set out in this Agreement. Before terminating this Agreement pursuant to this provision, the terminating party will provide written notice of intent to terminating enumerating the failures for which the termination is being sought and provide at least thirty (30) calendar days to the non-terminating party to cure such failure.
- C. Non-Appropriation of Funds. Resources for implementation of this Agreement may come from either party, depending upon budgetary availability. Neither party is obligated to expend any resources in connection with this Agreement unless specifically stated otherwise in the Agreement. No implementation of any portion of the Agreement may be initiated prior to the written assurance of such budgetary availability to the other party hereto. To the extent any external funding is required by a party in order to implement this Agreement and funding for such purposes is not appropriated to that party or is not otherwise available to the corresponding party, said party shall have no further financial obligations upon such determination. Should either party not have funding to carry out any obligations of a particular effort conducted under this Agreement, it shall immediately notify the other party of such fact and of such portions of the Agreement that may be deemed terminated or modified due to lack of funding.

VI. GOVERNMENTAL FUNCTION AND IMMUNITY

- A. Governmental Function. The City and University expressly agree that, in all things relating to this Interlocal Agreement, the parties enter into this Interlocal Agreement for the purpose of performing governmental functions and are performing governmental functions, as defined by the Texas Tort Claims Act. The parties further expressly agree that every act or omission of

each party, which in any way pertains to or arises out of this Agreement, falls within the definition of governmental function.

- B. Immunity. The City and University reserve, and do not waive, their respective rights of governmental and/or sovereign immunity and similar rights and do not waive their rights under the Texas Tort Claims Act. The parties expressly agree that neither party waives, nor shall be deemed hereby to waive, any immunity or defense that would otherwise be available to it against claims arising in the exercise of its powers or functions or pursuant to the Texas Tort Claims Act or other applicable statutes, laws, rules, or regulations.

VII. RISK ALLOCATION – LIMITATION OF LIABILITY

- A. Exclusion of Incidental and Consequential Damages. Independent of, severable from, and to be enforced independently of any other enforceable or unenforceable provision of this Agreement, neither party shall be liable to the other party (nor to any person claiming rights derived from such party's rights) for incidental, consequential, special, punitive, or exemplary damages of any kind - including lost profits, loss of business, and further including, mental anguish, emotional distress and attorney's fees- as a result of breach of any term of this Agreement, regardless of whether the party was advised, had other reason to know, or in fact knew of the possibility thereof, except as expressly provided herein. Neither party hereto shall be liable to the other party or any third party by reason of any inaccuracy, incompleteness, or obsolescence of any information provided or maintained by the other party regardless of whether the party receiving said information from the other party was advised, had other reason to know, or in fact knew thereof.
- B. Intentional Risk Allocation. The City and University each acknowledge that the provisions of this Agreement were negotiated to reflect an informed, voluntary allocation between them of all risks (both known and unknown) associated with the transactions associated with this Agreement. The disclaimers and limitations in this Agreement are intended to limit the circumstances of liability. The remedy limitations, and the limitations of liability, are separately intended to limit the forms of relief available to the parties.
- C. No Indemnification. The City and University expressly agree that, except as provided herein, neither Party shall have the right to seek indemnification or contribution from the other Party for any losses, costs, expenses, or damages directly or indirectly arising, in whole or part, from this Agreement. Each party must handle any claims resulting from their actions in this Agreement. The parties agree that each will be responsible for the acts or omissions of its respective representatives.
- D. Fines and Penalties. Each party shall be solely responsible for fiscal penalties, fines or any other sanctions occasioned as a result of a finding that violations of any applicable local, state or federal regulations, codes or laws occurred as a result of that parties actions, except as may be specifically provided by law.

VIII. GENERAL PROVISIONS

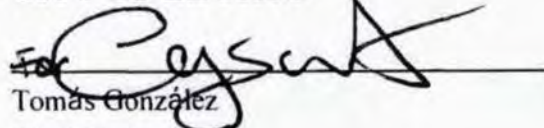
- A. Compliance with Laws. In the performance of their obligations under this Agreement, the

- G. Amendment; Assignability. This Agreement and the obligations hereunder shall not be amended, assigned, transferred or encumbered, in any manner without the written consent of the other party.
- H. Severability. All agreements and covenants contained in this Agreement are severable. Should any term or provision of this Agreement be declared illegal, invalid or unenforceable by a court of competent jurisdiction, the remainder of this Agreement will not be affected; and in lieu of each provision which to be illegal, invalid or unenforceable, there will be added as part of this Agreement, a provision which preserves the intention of the unenforceable provision, but which complies with the law.
- I. Section Headings. The paragraph or section headings contained in this Agreement are for reference purposes only and shall not in any way control the meaning or interpretation of this Agreement.
- J. Representation of Counsel; Mutual Negotiation. Each party has had the opportunity to be represented by counsel of its choice in negotiating this Agreement. This Agreement shall therefore be deemed to have been negotiated and prepared at the joint request, direction, and construction of the parties, at arms' length, with the advice and participation of counsel, and will be interpreted in accordance with its terms without favor to any party.
- K. Independent Contractor Relationship. This Agreement does not create an employee-employer relationship between parties. As such, the City is not subject to the liabilities or obligations the University obtains under the performance of this Agreement.
- L. Auditing Records for the Specific Project. Subject to applicable law and limitations, the parties will allow the reasonable inspection and copying of all records pertaining to the obligations arising from this Agreement.
- M. Force Majeure. There is no breach of contract should either party's obligations within this Agreement be delayed due to an act of God, outbreak of hostilities, riot, civil disturbance, acts of terrorism, the act of any government or authority, fire, explosion, flood, theft, malicious damage, strike, lockout, or any cause or circumstances whatsoever beyond either party's reasonable control. The delayed party must resume performing its obligations in this Agreement after the reason for the delay is resolved, by mutual agreement of the parties.
- N. Third-Party Beneficiaries. There are no third-party beneficiaries to this Agreement.
- O. Provisions Surviving This Agreement. Representations, releases, warranties covenants, indemnities, and confidentiality survive past the execution, performance, and termination of this Agreement.
- P. Representations and Warranties. The persons executing this Agreement on behalf of each of the parties warrant they have sufficient authority to sign on behalf of their respective parties.
- Q. Entire Agreement. This Agreement constitutes the entire agreement between the parties.

(Signatures follow on next page)

IN WITNESS WHEREOF, this Agreement has been executed by the parties named hereinabove as of the dates established below.

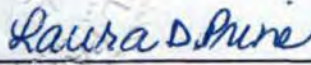
CITY OF EL PASO

~~For~~ 
Tomás González
City Manager

Date: 15 February 2022

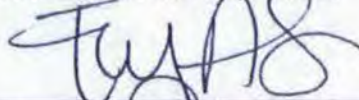


ATTEST:



Laura Prine
City Clerk

APPROVED AS TO FORM:



Evy A. Sotelo
Assistant City Attorney

APPROVED AS TO CONTENT:



Elizabeth K. Triggs
Interim Economic Development Director

THE UNIVERSITY OF TEXAS AT EL PASO

**Roberto
Osegueda**

Digitally signed by Roberto Osegueda
DN: cn=Roberto Osegueda, o=The University
of Texas at El Paso, ou=Vice President for
Research, email=osegueda@utep.edu, c=US
Date: 2022.02.04 14:08:57 -0700

Roberto A. Osegueda
Vice President for Research

EXHIBIT A

UNIVERSITY OF TEXAS AT EL PASO BUDGET SUMMARY								
PRINCIPAL INVESTIGATOR: Ahsan Choudhuri								
CO-PRINCIPAL INVESTIGATOR: Ryan B Wicker								
PERIOD: From 10/1/2021 to 9/30/2024								
TITLE: El Paso Makes Aerospace and Defense Supply Chain Innovation Network for Manufacturers - Cost Share								
AGENCY: CITY OF EL PASO (LOCL)								
		Year 1		Year 2		Year 3		Total
		Wages	Fringe	Wages	Fringe	Wages	Fringe	Wages
A SALARIES AND FRINGE								
a. Senior Personnel								
1. Ahsan Choudhuri		0	0	0	0	0	0	0
2. Ryan B Wicker		0	0	0	0	0	0	0
SUBTOTAL		0	0	0	0	0	0	0
b. Other Professional								
1. Executive Director	(Yrs 1-3) 12.0mos@50.0%	50,123	14,022	51,627	14,281	53,176	14,548	154,926
2. Engineer	(Yrs 1-3) 12.0mos@50.0%	32,580	11,001	33,557	11,169	34,564	11,343	100,701
3. Administrator	(Yrs 1-3) 12.0mos@50.0%	25,062	9,706	25,813	9,836	26,588	9,969	77,463
SUBTOTAL		107,765	34,729	110,997	35,286	114,328	35,860	333,090
B TOTAL - SALARIES AND FRINGE		107,765	34,729	110,997	35,286	114,328	35,860	333,090
C TOTAL - COMBINED SALARIES AND FRINGE BENEFITS		142,494		146,283		150,188		438,965
D EQUIPMENT								
TOTAL - EQUIPMENT		0		0		0		0
E TRAVEL								
1. DOMESTIC			9,200	9,200		9,200		27,600
TOTAL - TRAVEL		9,200		9,200		9,200		27,600
F PARTICIPANT SUPPORT COSTS								
TOTAL - PARTICIPANT COST		0		0		0		0
G OTHER DIRECT COSTS								
1. MATERIALS AND SUPPLIES			134,915	134,915		134,915		404,745
2. SUBCONTRACTS			194,900	169,900		169,900		534,700
- AQOMM			112,500	100,000		100,000		312,500
- El Paso Chamber			82,400	69,900		69,900		222,200
3. WORKSHOPS/SEMINARS			31,330	31,330		31,330		93,990
TOTAL - OTHER DIRECT COSTS		361,145		336,145		336,145		1,033,435
H TOTAL DIRECT COSTS		512,839		491,628		495,533		1,500,000
I INDIRECT COSTS 0.0% Modified total direct cost		0		0		0		0
J TOTAL ESTIMATED COSTS		512,839		491,628		495,533		1,500,000

All personnel transactions required to fulfill the provisions of this proposal will be made in accord with, and will be governed by, the appropriate University Personnel Policies and Regulations. All salary increases will conform to University policies, subject to the availability of funds. No officer, member, or employee of the University and no other public officials for the governing body of the locality or localities in which the project is situated or being carried out who exercise any functions or responsibilities in the review or approval of the undertaking or carrying out of this project, shall participate in any decision relating to this project which affects his personal interest or have any personal or pecuniary interest, direct or indirect, in this project or the proceeds thereof.

Personnel

For the period beginning on the effective date of this Agreement and ending on September 30, 2024, **Dr. Ahsan Choudhuri** ("Aerospace Center), and **Dr. Ryan Wicker** (W.M. Keck Center for 3D Innovation) will serve as technical advisors.

Director

The Director will be responsible for designing the program of services and resources and working directly with manufacturers to develop a customized program of services for each company. The Director will be responsible for developing a market strategy of El Paso's supply base to include marketing materials and direct outreach to the DoD, NASA and aerospace and defense buyers. The Director will be responsible for compliance with program requirements and tracking performance metrics to ensure that goals are met.

Engineer

The Mechanical Engineer will work directly with manufacturers to identify and implement advanced manufacturing technologies that would improve their capabilities and competitiveness and provide direct engineering design services and coordinate through UTEP's Aerospace and Keck Center for student interns to provide engineering design services.

Administrator

The Administrator will organize the annual supplier summit and coordinate outreach activities to connect El Paso manufacturers to the DoD, NASA and aerospace and defense buyers. The administrator will also be responsible for the daily operations of the Innovation Network.

Travel

Travel expenses cover 2 marketing trips a year to introduce local manufacturers and our local supply base to the DoD, NASA and aerospace and defense buyers. Marketing trips will include one staff member and one advisor and owners of local manufacturing companies. Participating manufacturers will pay their own expenses. The average costs of each trip would be \$4,600. Costs would include approximately \$1,000 per person for airfare, \$500 for hotel per person, \$300 per diem for food for a four-day trip for one person and \$1,000 for conference fees

Other Direct Costs**Supplies**

Materials for the additive manufacturing equipment is estimated at \$50,000 a year. Office furniture for the initial off set up is estimated at \$5,000 and general office supplies that includes general office supplies such as paper, envelopes and staples is estimated at \$5,000 annually. Printed marketing booklets featuring El Paso's suppliers are estimated to cost \$5,000 annually, and initial marketing displays for conferences is estimated at \$2,000. Aerospace and Defense Quality Certification Consulting Services will be contracted to work with local manufacturers to obtain these certifications. Estimated at \$5,000 per company with 20 companies being served per year for a total cost per year of \$100,000. Our grant compliance staff advised us that since this item will be procured competitively that it should be placed under the Materials and Supplies line item. Our revised budget reflects that change. All cost for certifications will be part of the cost share

Subcontracts

The National Center for Defense Manufacturing and Machining (NCDMM), a member of the El Paso Makes consortium, will be sub awardee to assist local manufacturing businesses in identifying and developing proposals to address DoD opportunities.

The El Paso Chamber, a member of the El Paso Makes consortium, will be a sub awardee for Business Coaching and Business Advisory services.

EXHIBIT B
“BUDGET NARRATIVE”

El Paso Makes: Aerospace and Defense Supply Chain Innovation Network for Manufacturers

Budget Narrative

El Paso Makes requests \$1,500,000 from the EDA through the Venture Challenge Grant to support the creation of the Aerospace and Defense Supply Chain Innovation Network for Manufacturers. The EDA Challenge Grant will be matched by \$1,500,000 from the City of El Paso from 10/01/2021 to 9/30/2024.

A.1.0 Personnel

Principal Investigator & Co-Principal Investigator

Dr. Ahsan Choudhuri (Aerospace Center) and Dr. Ryan Wicker (W.M. Keck Center for 3D Innovation) will serve as Technical Advisors. They will advise on the design of programs and manufacturing resources needed to improve the innovation and technical capabilities of the companies. They will connect frontier technologies being developed at their respective centers for possible commercialization by local manufacturers. They will connect the Innovation Network to their contacts at the DoD, NASA and aerospace and defense companies.

Dr. Ahsan Choudhuri will receive the equivalent of one summer month's salary at 25% effort for the duration of the project and Dr. Ryan Wicker will receive the equivalent of one summer month's salary at 20% effort.

- Year 1: \$10,625
- Year 2: \$10,944
- Year 3: \$11,272

Federal Share: \$32,841

Matching Share: \$0

Director

The Director will be responsible for designing the program of services and resources and working directly with manufacturers to develop a customized program of services for each company. The Director will be responsible for developing a market strategy of El Paso's supply base to include marketing materials and direct outreach to the DoD, NASA and aerospace and defense buyers. The Director will be responsible for compliance with program requirements and tracking performance metrics to ensure that goals are met.

Engineer

The Mechanical Engineer will work directly with manufacturers to identify and implement advanced manufacturing technologies that would improve their capabilities and competitiveness and provide direct engineering design services and coordinate through UTEP's Aerospace and Keck Center for student interns to provide engineering design services.

El Paso Makes: Aerospace and Defense Supply Chain Innovation Network for Manufacturers

Administrator

The Administrator will organize the annual supplier summit and coordinate outreach activities to connect El Paso manufacturers to the DoD, NASA and aerospace and defense buyers. The administrator will also be responsible for the daily operations of the Innovation Network.

- Year 1: \$215,530
- Year 2: \$221,994
- Year 3: \$228,656

Federal Share: \$333,090
Matching Share: \$333,090

Students

A total amount of \$170,493 is requested for salary support of undergraduate students.

Each semester two Graduate and two Undergraduate Student Interns will be assigned to work 20 hours per week for the Innovation Network Student to provide engineering design services to local manufacturers.

- Year 1: \$56,831
- Year 2: \$56,831
- Year 3: \$56,831

Federal Share: \$170,493
Matching Share: \$0.00

A.2.0 Fringe Benefits

Fringe benefits are based on institutional approved rates that are applied to all university faculty and staff. Personnel costs conform to University rates and policies, and all salary costs are budgeted with a 3% increase per year. A total amount of \$131,203 is requested to provide fringe benefits for the duration of the project under federal funds and total of \$105,875 will be cost shared.

	Faculty	Staff	Graduate Student	Undergraduate Student
Premium Monthly Rate	\$898.48	\$898.48	\$254.42	\$0.00
Benefits Rate (%)	\$16.72	\$17.22	\$0.18	\$0.18

- Year 1: \$77,847
- Year 2: \$79,014
- Year 3: \$80,217

Federal Share: \$131,203
Matching Share: \$105,875

El Paso Makes: Aerospace and Defense Supply Chain Innovation Network for Manufacturers

A.3.0 Equipment

To create a design and prototyping lab available for local manufacturers, we will purchase 4 MakerBot 3D Printers for Industrial Use estimated at \$6,000 per printer. The Innovation Network will include 6 design stations with 49" displays and desktops connected to a securely controlled server and storage array. Each design station is estimated to cost \$3,000 and the server and storage array is estimated to cost \$5,000. Total of \$72,000 is being requested.

- Year 1: \$72,000
- Year 2: \$0
- Year 3: \$0

Federal Share: \$72,000

Matching Share: \$0

A.4.0 Travel

Travel expenses cover 3 marketing trips a year to introduce local manufacturers and our local supply base to the DoD, NASA and aerospace and defense buyers. Marketing trips will include one staff member and one advisor and owners of local manufacturing companies. Participating manufacturers will pay their own expenses. The average costs of each trip would be \$4,600. Costs would include approximately \$1,000 per person for airfare, \$500 for hotel per person, \$300 per diem for food for a four-day trip for one person and \$1,000 for conference fees. The City of El Paso's match the other two trip per year of the travel costs.

- Year 1: \$13,800
- Year 2: \$13,800
- Year 3: \$13,800

Federal Share: \$13,800

Matching Share: \$27,600

A.5.0 Other Direct Costs

Supplies

Materials for the additive manufacturing equipment is estimated at \$50,000 a year. Office furniture for the initial off set up is estimated at \$5,000 and general office supplies that includes general office supplies such as paper, envelopes and staples is estimated at \$5,000 annually.

Printed marketing booklets featuring El Paso's suppliers are estimated to cost \$5,000 annually, and initial marketing displays for conferences is estimated at \$2,000.

Aerospace and Defense Quality Certification Consulting Services will be contracted to work with local manufacturers to obtain these certifications. Estimated at \$5,000 per company with 20 companies being served per year for a total cost per year of \$100,000. Our grant compliance staff advised us that since this item will be procured competitively that it should be placed under the Materials and Supplies line item. Our revised budget reflects that change. All cost for certifications will be part of the cost share.

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- Year 1: \$138,781
- Year 2: \$163,755
- Year 3: \$159,467

Federal Share: \$57,257
Matching Share: \$404,745

Subcontracts

The National Center for Defense Manufacturing and Machining (NCDMM), a member of the El Paso Makes consortium, will be sub awardee to assist local manufacturing businesses in identifying and developing proposals to address DoD opportunities. This is estimated at \$150,000 annually.

The El Paso Chamber, a member of the El Paso Makes consortium, will be a sub awardee for Business Coaching and Business Advisory services estimated at \$119,900 per year. Business Coaching services are estimated at \$222/hour for up to 10 participants. This amount would provide approximately 450 hours of coaching services to local manufacturers. Coaching will be customized and could be provided one-on-one or in group settings depending on the need and the topic. Business Advisory Services will be provided by David Jerome, President and CEO of the El Paso Chamber, who will advise on the design of business coaching and other services. Ten percent of his time will be dedicated to the Innovation Network and will come from the City's cash match for a total of \$59,700.

The City of El Paso match \$534,700 for subawards.

- Year 1: \$369,900
- Year 2: \$369,900
- Year 3: \$369,900

Federal Share: \$275,000
Matching Share: \$534,700

Other Costs - Contractual Costs

In reviewing this with our grant compliance staff, they advised that NCDMM and the El Paso Chamber be treated as sub-awardees. Because of this change and the impact on indirect costs, we had an additional \$55,827 that was unallocated. We had not initially budgeted for software under federal funds even though it is critical to our support for manufacturers. We added software to the budget under Other Costs (Contractual Line Item). We will purchase industry-specific software to support manufacturers' growth into aerospace and defense.

- Year 1: \$6,203
- Year 2: \$24,812
- Year 3: \$24,812

Federal Share: \$55,827
Matching Share: \$0.00

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Workshops

Cost for the workshops that will be organize on SBIR and STTR opportunities, and SBIR and STTR writing, project management, and research capacity development. Workshops will be offered and expect participation of the small business representatives of various federal agencies and prime contractors. A total of \$60,000 in federal funds is being requested for this budget category and \$93,990 will be cost shared.

- Year 1: \$51,330
- Year 2: \$51,330
- Year 3: \$51,330

Federal Share: \$60,000
 Matching Share: \$93,990

A.6.0 Indirect Costs

The DHHS indirect cost rate for UTEP is 33%. Thus, the total amount of indirect costs requested for the effort is \$298,488.

- Year 1: \$99,992
- Year 2: \$99,248
- Year 3: \$99,248

Federal Share: \$298,488
 Matching Share: \$0

Staffing Plan

Name/Title	Annual Salary	Total Amount Charged to Project Year 1	Total Amount Charged to Project Year 2	Total Amount Charged to Project Year 3	Percentage of Dedicated Time	Total Federal Share	Total Non-Federal Share (Matching)
Executive Director	\$100,246	\$50,123	\$51,627	\$53,176	100%	\$154,926	\$154,926
Mechanical Engineer	\$65,700	\$32,580	\$33,557	\$34,564	100%	\$100,701	\$100,701
Administrator	\$50,124	\$25,062	\$25,813	\$26,588	100%	\$77,463	\$77,463
(2) Graduate Student Interns	\$36,717	\$36,717	\$36,717	\$36,717	50% (each)	\$110,151	\$0
(2) Undergraduate Student Interns	\$20,114	\$20,114	\$20,114	\$20,114	50% (each)	\$60,342	\$0
Dr. Ahsan Choudhuri, Technical Advisor	\$249,600	\$5,356	\$5,517	\$5,682	10%	\$16,555	\$0
Dr. Ryan Wicker, Technical Advisor	\$237,096	\$5,269	\$5,427	\$5,590	10%	\$16,286	\$0

El Paso Makes: Aerospace and Defense Supply Chain Innovation Network for Manufacturers

		Federal Funds			
		Year 1	Year 2	Year 3	Total
A	SALARIES AND WAGES - SENIOR PERSONNEL				
	Ahsan Choudhuri (Yrs1-3) 1.0summos@25.0%	\$5,356	\$5,517	\$5,682	\$16,555
	Ryan Wicker (Yrs1-3) 1.0summos@20.0%	\$5,269	\$5,427	\$5,590	\$16,286
	SUBTOTAL	\$10,625	\$10,944	\$11,272	\$32,841
B	OTHER PERSONNEL				
	Executive Director (Yrs1-3) 12.0mos@50.0%	\$50,123	\$51,627	\$53,176	\$154,926
	Engineer (Yrs1-3) 12.0mos@50.0%	\$32,580	\$33,557	\$34,564	\$100,701
	Administrator (Yrs1-3) 12.0mos@50.0%	\$25,062	\$25,813	\$26,588	\$77,463
	Graduate Students (Yrs1-3) 2-12.0mos@50.0%	\$36,717	\$36,717	\$36,717	\$110,151
	Undergraduate Students (Yrs1-3) 2-52.0wks@20.0hrs	\$20,114	\$20,114	\$20,114	\$60,342
	TOTAL - SALARIES AND WAGES	\$175,221	\$178,772	\$182,431	\$536,424
C	FRINGE BENEFITS				
1	FACULTY AND STAFF	\$36,910	\$37,520	\$38,149	\$112,579
2	STUDENTS	\$6,208	\$6,208	\$6,208	\$18,624
	TOTAL FRINGE BENEFITS	\$43,118	\$43,728	\$44,357	\$131,203
D	TOTAL - SALARIES AND WAGES/FRINGE BENEFITS	\$218,339	\$222,500	\$226,788	\$667,627
E	EQUIPMENT				
1	Equipment	\$72,000	\$ -	\$ -	\$72,000
	TOTAL - EQUIPMENT	\$72,000	\$ -	\$ -	\$72,000
F	TRAVEL				
1	DOMESTIC	\$4,600	\$4,600	\$4,600	\$13,800
	TOTAL - TRAVEL	\$4,600	\$4,600	\$4,600	\$13,800
G	OTHER DIRECT COSTS				
1	MATERIALS AND SUPPLIES	\$3,866	\$28,840	\$24,552	\$57,257
2	SUBCONTRACTS	\$75,000	\$100,000	\$100,000	\$275,000
	<i>NCDMM</i>	<i>\$37,500</i>	<i>\$50,000</i>	<i>\$50,000</i>	<i>\$137,500</i>
	<i>El Paso Chamber</i>	<i>\$37,500</i>	<i>\$50,000</i>	<i>\$50,000</i>	<i>\$137,500</i>
3	OTHER COSTS	\$6,203	\$24,812	\$24,812	\$55,827
	<i>Software Expenses</i>	<i>\$6,203</i>	<i>\$24,812</i>	<i>\$24,812</i>	<i>\$55,827</i>
4	WORKSHOPS/SEMINARS	\$20,000	\$20,000	\$20,000	\$60,000
	TOTAL - OTHER DIRECT COSTS	\$105,069	\$173,652	\$169,364	\$448,085
H	TOTAL DIRECT COSTS	\$400,008	\$400,752	\$400,752	\$1,201,512
	INDIRECT COSTS				
I	33.0% Modified total direct cost	\$99,992	\$99,248	\$99,248	\$298,488
J	TOTAL ESTIMATED COSTS	\$500,000	\$500,000	\$500,000	\$1,500,000

El Paso Makes: Aerospace and Defense Supply Chain Innovation Network for Manufacturers

		Match Funds			
		Year 1	Year 2	Year 3	Total
A	SALARIES AND WAGES - SENIOR PERSONNEL				
	Ahsan Choudhuri (Yrs1-3) 1.0summos@25.0%	\$ -	\$ -	\$-	\$-
	Ryan Wicker (Yrs1-3)1.0summos@20.0%	\$ -	\$-	\$ -	\$ -
	<i>SUBTOTAL</i>	\$ -	\$ -	\$ -	\$ -
B	OTHER PERSONNEL				
	Executive Director (Yrs1-3)12.0mos@50.0%	\$50,123	\$51,627	\$53,176	\$154,926
	Engineer (Yrs1-3) 12.0mos@50.0%	\$32,580	\$33,557	\$34,564	\$100,701
	Administrator (Yrs1-3) 12.0mos@50.0%	\$25,062	\$25,813	\$26,588	\$77,463
	Graduate Students (Yrs1-3) 2-12.0mos@50.0%	\$-	\$-	\$ -	\$ -
	Undergraduate Students (Yrs1-3) 2-52.0wks@20.0hrs	\$-	\$-	\$ -	\$ -
	TOTAL - SALARIES AND WAGES	\$107,765	\$110,997	\$114,328	\$333,090
C	FRINGE BENEFITS				
1	FACULTY AND STAFF	\$34,729	\$35,286	\$35,860	\$105,875
2	STUDENTS	\$ -	\$-	\$-	\$ -
	TOTAL FRINGE BENEFITS	\$34,729	\$35,286	\$35,860	\$105,875
D	TOTAL - SALARIES AND WAGES/FRINGE BENEFITS	\$162,394	\$166,183	\$170,088	\$498,665
E	EQUIPMENT				
1	Equipment	\$ -	\$ -	\$ -	\$ -
	TOTAL - EQUIPMENT	\$-	\$ -	\$ -	\$ -
F	TRAVEL				
1	DOMESTIC	\$9,200	\$9,200	\$9,200	\$27,600
	TOTAL - TRAVEL	\$9,200	\$9,200	\$9,200	\$27,600
G	OTHER DIRECT COSTS				
1	MATERIALS AND SUPPLIES	\$134,915	\$134,915	\$134,915	\$404,745
2	SUBCONTRACTS	\$294,900	\$269,900	\$269,900	\$534,700
	<i>NCDMM</i>	<i>\$112,500</i>	<i>\$100,00</i>	<i>\$100,00</i>	<i>\$312,500</i>
	<i>El Paso Chamber</i>	<i>\$82,400</i>	<i>\$69,900</i>	<i>\$69,900</i>	<i>\$222,200</i>
3	WORKSHOPS/SEMINARS	\$31,330	\$31,330	\$31,330	\$93,990
	TOTAL - OTHER DIRECT COSTS	\$341,245	\$316,245	\$316,245	\$973,735
H	TOTAL DIRECT COSTS	\$512,839	\$491,628	\$495,533	\$1,500,000
	INDIRECT COSTS				
I	33.0% Modified total direct cost	\$ -	\$ -	\$-	\$ -
J	TOTAL ESTIMATED COSTS	\$512,839	\$491,628	\$495,533	\$1,500,000

Project Narrative

Project Title: El Paso Makes: Aerospace and Defense Supply Chain Innovation Network for Manufacturers

Section 1: Project Description and Overview

Section 1a: Executive Summary

Funding from the Venture Challenge to El Paso Makes will create the Aerospace and Defense Supply Chain Innovation Network for Manufacturers to support rapid growth of our small and medium enterprises. The Innovation Network will enhance the innovation and business capabilities of El Paso’s existing manufacturing sector and connect them to the national aerospace and defense value chain. El Paso Makes led by the University of Texas at El Paso’s Aerospace Center (cSETR) and W.M. Keck Center for 3D Innovation, the El Paso Chamber, and the City of El Paso will leverage the national research preeminence at UTEP to strengthen the competitiveness of El Paso’s manufacturing sector.

Our local manufacturers primarily sell to the manufacturing hub in northern Mexico in the automotive, appliance and medical industries. These businesses successfully compete against Mexican companies whose labor costs are lower. Our businesses have built a competitive advantage by adopting advanced manufacturing technologies, whilst leveraging El Paso’s competitive cost structure and resilient value chain. Our companies are poised for rapid growth in their core and related industries to include aerospace and defense. To accelerate this growth, we will work with them to significantly expand business opportunities.

The Innovation Network for Manufacturers will provide access to applied research, engineering design services, equipment, software, technology, talent and business services, value chain support, customer introduction and other resources, all to ensure that our manufacturers can successfully compete for business in aerospace and defense.

Section 1b: Organizational Mission

El Paso Makes is a consortium led by the applicant, University of Texas at El Paso’s Aerospace Center (cSETR) and W.M. Keck Center for 3D Innovation, the City of El Paso, and the El Paso Chamber. The consortium also includes the County of El Paso, Workforce Solutions Borderplex, Western Technical College and the National Center for Defense Manufacturing and Machining (NCDMM)/America Makes. Our mission is to create jobs and business opportunity in aerospace, defense and advanced manufacturing by strengthening the capability of our local supply base using the national research preeminence of UTEP’s Aerospace Center and Keck Center. We are aligning UTEP’s applied research, technical expertise and talent development with the resources and business expertise of the Chamber to support these local entrepreneurs.

The El Paso Makes consortium has grown in impact and size from a partnership between UTEP’s Aerospace Center and Keck Center and the County of El Paso. In 2017, UTEP and the County were granted an EDA i6 Challenge Grant to assist with the development of the Innovation Acceleration Park (tRIAC). This successful partnership grew to include the development an Aerospace and Defense Small Business Accelerator with the City of Horizon, an Aerospace and Defense associate degree with Western Technical College and the inclusion of Aerospace, Defense and Advanced Manufacturing as economic development priorities for the El Paso Chamber, the County of El Paso, the City of El Paso and the City of Horizon. And recently, the El Paso Chamber in partnership with the Aerospace Center and Keck Center has a full-time consultant dedicated to this initiative.

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About Aerospace Center (cSETR) at the University of Texas at El Paso: The NASA Aerospace Center (cSETR) was established at The University of Texas at El Paso (UTEP) to promote research, education, and regional economic development in aerospace and energy engineering. The Aerospace Center, supported by the Group 5 and Group 6 National Aeronautics and Space Administration (NASA) Cooperative Agreement, maintains a diverse portfolio of grants and contracts from federal agencies and university partners. The Aerospace Center has more than 26,000 sq-ft excellent facilities and 8,000 acres of Test Range for aerospace and energy R&D and actively conducts a wide range of analytical, experimental and computational research in aerospace and energy engineering with a particular interest in propulsion and fossil energy technologies. The Aerospace Center supports more than 140 faculty, staff, and student researchers.

About the W. M. Keck Center for 3D Innovation (KECK Center) at the University of Texas at El Paso: The W. M. Keck Center for 3D Innovation (Keck Center) is a premier university research enterprise with an emphasis on frontier additive manufacturing processes, materials, and applications. The Keck Center features a 13,000-square-foot, state-of-the art facility with more than 50 additive manufacturing machines and more than 50 involved faculty, staff, students and researchers with multiple successful national and international collaborations. The Keck Center last year opened a 10,000 sq-ft new research space, commercialization, and training facility in downtown El Paso.

The Keck Center is also the home of the America Makes' first satellite center. America Makes, operated by the National Center for Defense Manufacturing and Machining (NCDMM), was launched in August 2012 and is the nation's first Institute within the National Network for Manufacturing Innovation. America Makes is managed by the Air Force Research Laboratory (AFRL) through the Defense-wide Manufacturing Science and Technology Program — Office of the Secretary of Defense (OSD), Manufacturing and Industrial Base Policy. AFRL on behalf of OSD leads an interagency team composed of the Department of Commerce's National Institute of Standard and Technology, Department of Energy, Department of Education, the National Aeronautics and Space Administration (NASA), and the National Science Foundation.

About the El Paso Chamber: The El Paso Chamber, as a principal convener of regional human capital, institutional officials, and business leaders, is uniquely positioned to connect this vibrant innovation ecosystem to economic development activities in the El Paso region. The Chamber has long established successes with Ft. Bliss, the County and City of El Paso, UTEP, and business leaders and investors in the El Paso community. In partnership with the Aerospace Center and the Keck Center, the El Paso Chamber has hired a full-time Aerospace, Defense and Advanced Manufacturing Consultant. The Chamber is El Paso's largest and oldest business institution and uniquely qualified to coach and advocate for business. To that end, the El Paso Chamber has identified 70 locally-owned suppliers and American-owned medium-sized suppliers with significant operations in El Paso and sent those suppliers a survey to learn more about them and their interest in this initiative. This team is visiting suppliers who range from new start-up companies to established small businesses to assess their current capabilities and their growth potential.

El Paso Makes led by the Aerospace Center, the Keck Center and the El Paso Chamber is best positioned to support an innovation ecosystem for aerospace and defense for El Paso County because of UTEP's national research preeminence in aerospace and additive manufacturing and their experience accelerating small business growth and because of the El Paso Chamber's business expertise and experience convening public and private sector for maximum economic impact.

Section 2: Ecosystem Resources and Assets

Section 2a: Location, Region, and Stakeholders

El Paso Makes will provide services and support to all start up and small and medium manufacturers located in El Paso County, Texas (48141) who want to use innovation and advanced manufacturing technologies to increase their competitiveness and expand their business into the aerospace and defense industry and other markets. El Paso County includes all of Texas Congressional District 16 and a portion of Texas Congressional District 23.

El Paso County, located on the U.S./Mexico Border, is part of the fourth largest manufacturing in the world which includes Juarez, Mexico and Dona Ana County, New Mexico. A significant portion of those manufacturing jobs and investment are in Juarez but El Paso's supplier base is resilient and agile. As the second largest trade region on the U.S./Mexico border, the region is supported by six international ports of entry, an international airport and billions of dollars of recent investment in modernizing highways and roads to support cross border trade and travel.

El Paso is home to the largest bilingual and bi-cultural workforce in the Western Hemisphere. Our workforce is young compared to other communities who are facing the dilemma of an aging workforce. The median age of our workforce is 32.

There are nine institutions of higher learning in the region including The University of Texas at El Paso (UTEP) and the Texas Tech Health Sciences Center at El Paso. In December 2018, UTEP was awarded an R1 designation (top tier doctoral university with very high research activity) by the Carnegie Classification of Institutions of Higher Education. It is one of the only top tier research universities in the country with a majority Latino student population. UTEP is also among the top 10 U.S. universities for helping graduates move from family incomes in the bottom 20% to the top 20%. Because of the research experience and quality of education, the programs in the Aerospace Center and the Keck Center are a significant pipeline for the aerospace and defense industry. Unfortunately, there are too few opportunities available to these graduates to stay and work in El Paso.

El Paso is home to Fort Bliss, a military base recognized as a significant power projection platform and that includes several critical command units including Joint Modernization Command and 32nd Army Air and Missile Defense Command. Also in the region are nearby White Sands Missile Range and Holloman Air Force Base. These Department of Defense assets represent significant and often untapped business opportunity for local manufacturers and defense contractors providing engineering and design services. Other regional business opportunities in aerospace include Blue Origin and Virgin Galactic Headquarters, UP Aerospace, Exos Aerospace and Payload Specialties located at Spaceport America.

Building from these assets and positioning the Aerospace Center and the Keck Center as the innovation engine of this ecosystem, the El Paso Makes' Aerospace and Defense Supply Chain Innovation Network for Manufacturing will target local manufacturers who are challenging the defining status quo of manufacturing today. Over the last few decades, the manufacturing industry has left the United States to cheap labor markets in other parts of the world as a means to remain competitive. El Paso companies have remained resilient and strong, building in America by creating custom-made, quality products that are price competitive because of their adoption of advanced manufacturing technologies and innovation rather than a reliance on low wages. With the right resources, support and access to emerging technologies, these companies could take advantage of business opportunities in aerospace and defense, adding new high paying jobs to the economy.

El Paso Makes has built a county-wide consortium motivated and capable of providing support and resources to assist in the growth of these companies. What has been missing is a central coordinating hub that

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is fully staffed and resourced to fully implement a cohesive strategy and program of services and coordinate and leverage action and resources for maximum benefit to El Paso's manufacturers and to our local economy.

Section 2b: Investment Opportunity for this Region

The University of Texas at El Paso's Aerospace Center and W.M. Keck Center for 3D Innovation national research preeminence and their deep connections to the aerospace and defense industry that has been built up over the last two decades will serve as the catalyst for building a transformational ecosystem that will increase wages and reverse our brain drain. These Centers combined have provided significant research and educational opportunities for El Paso's students, but the vast majority of these STEM graduates go to jobs in other communities with more STEM occupations and better paying jobs. El Paso Makes will marshal the research and connections of these Centers to create jobs and business opportunity in aerospace, defense and advanced manufacturing. These Centers have been funded to create a Design Center that can be contracted to provide the research and development backbone that most of our local manufacturers can't afford to invest in as part of their operations.

Significant investments and partnerships have developed to support this initiative. In 2017, UTEP and the County were granted an EDA i6 Challenge Grant to assist with the development of the Innovation Acceleration Park (tRIAC). This successful partnership grew to include the development an Aerospace and Defense Small Business Accelerator with the City of Horizon, an Aerospace and Defense associate degree with Western Technical College and the inclusion of Aerospace, Defense and Advanced Manufacturing as economic development priorities for the El Paso Chamber, the County of El Paso, the City of El Paso and the City of Horizon. And recently, the El Paso Chamber in partnership with the Aerospace Center and Keck Center has hired full-time consultant dedicated to this initiative. In addition, the County of El Paso, the City of El Paso and Workforce Solutions Borderplex have identified aerospace and defense and advanced manufacturing as industry priorities for incentives, grants and support.

These existing resources and partnerships serve as the foundation for El Paso Makes efforts to accelerate the growth of El Paso's manufacturing sector. The El Paso Makes' Aerospace and Defense Supply Chain Innovation Network for Manufacturers will leverage these existing assets and resources through our County-wide partnership and create additional programs and resources to support the growth of a robust aerospace, defense and advanced manufacturing ecosystem.

Section 3: Proposed Solution

Section 3a: Solution Details.

El Paso was home to a strong garment manufacturing base that was wiped out in the 1990s by NAFTA and globalization forces that sought low-cost advantage in countries with significantly lower wages. These lost jobs offered living wages and benefits with a path to the middle class. When these 22,000 jobs were lost, impacted El Pasoans were unable to find employment with similar wages and benefits because of their lack of education and lack of skills needed for remaining industries. El Paso community leaders learned from this economic dislocation to never again bet on low-cost labor as a competitive advantage and worked to rebuild the economy by strengthening public education, by facilitating broad access to secondary education and by diversifying the economy in sectors with higher wages. This economic re-tooling paid off with record low unemployment and an economy where healthcare and trade related jobs helped boost chronically low-income levels.

Some significant weaknesses still exist in our economy and El Paso Makes seeks to tackle these weaknesses head on. El Paso's wages are still significantly lower compared to other communities of our size.

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The University of Texas at El Paso, the Texas Tech Health Sciences Center at El Paso, the El Paso Community College, and our private technical schools have made significant strides in graduating many more El Pasoans with associate and bachelor degrees, particularly in STEM fields, but El Paso's relatively limited number of STEM occupations and our lower wages results in a significant number of these graduates seeking employment with higher wages in other communities. This loss of STEM talent to other communities has thwarted our ability to take advantage of growth in innovation and technology fueled industries.

El Paso Makes seeks to tackle these two challenges head on by investing in a strategy that will create 3,500 new engineering and technologist positions and 12,000 technical positions by 2030 in aerospace, defense and advanced manufacturing. These high paying jobs in STEM occupations will help increase El Paso wages, and the increase in the number of engineering positions available in these industries will provide opportunities in El Paso for UTEP graduates that do not exist in El Paso today.

El Paso Makes will do this by creating the Aerospace and Defense Supply Chain Innovation Network for Manufacturers. The Aerospace and Defense Supply Chain Innovation Network for Manufacturers will enhance the technological, technical and business capabilities of existing manufacturers so that they can successfully compete for aerospace and defense business. The ability of El Paso's manufacturing base to grow and thrive beyond its current markets will depend on its ability to compete through innovation and the use of advanced manufacturing technologies.

The El Paso Makes' Aerospace and Defense Supply Chain Innovation Network for Manufacturers will be a one-stop-shop for these targeted businesses to access these services and support:

Research and Development. Very few of El Paso's manufacturers can afford to invest in research and development and engineering design operations but increasingly manufacturers need to innovate and provide engineering design services to their customers to remain competitive in a rapidly evolving marketplace. El Paso Makes' Innovation Hub will provide research and development and engineering design services through UTEP's Design Center to local manufacturers. These services will support the development of new products and processes or help solve a technical challenge. In addition, the Innovation Hub will help businesses identify opportunities to compete for Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) funding and to prepare competitive proposals for this funding.

Technology, Equipment and Software. Competing through innovation in today's manufacturing environment can be prohibitively expensive because of the high costs of new technology, hardware and software. The Innovation Network space will provide access to hardware, technology and software that our local manufacturers will need to compete successfully for business in aerospace and defense.

Business Development Assistance and Support. Local suppliers have communicated a variety of business challenges that prevent them from competing for business in aerospace and defense. These challenges include lack of knowledge about federal procurement and the business practices and systems necessary to compete for DoD contracts. Many do not have the quality certifications necessary to qualify as a potential supplier for aerospace and defense. In all these areas, the El Paso Chamber will provide coaching and advocacy assistance.

The Innovation Network will contract the National Center for Defense Manufacturing and Machining (NCDMM) to assist local manufacturing businesses in identifying and developing proposals to address Department of Defense (DoD) opportunities. Additionally, NCDMM has established DoD accounting practices and contracting vehicles that can be utilized to rapidly accept DoD contracts, alleviating the need for small, local businesses to establish government-approved accounting systems and a lengthy contracting timeline, which commonly requires up to two years and significant costs.

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With Chamber support, the Innovation Network will provide consulting services to local manufacturers to obtain the quality certifications required in aerospace and defense markets, and the Innovation Network will provide business coaching and mentoring.

Talent and Workforce Development Assistance and Support. Housed at the Chamber, the Innovation Network will work with Workforce Solutions Borderplex, UTEP and Western Technical College to create and fund custom training and apprenticeship programs to support workforce needs identified by El Paso suppliers such as the lack of qualified machinists, sheet metal fabricators and plastic injection molding specialists.

The Innovation Hub will coordinate with suppliers to resolve short-term staffing needs by creating a program to pay UTEP and Western Technical College interns. This would allow suppliers to pursue new business opportunities without adding additional employees to payroll that they might not be able to support until those opportunities create sustained growth over time.

Connections and Marketing. Our El Paso suppliers have largely earned their business referrals from existing customers. They have primarily focused their marketing efforts on manufacturers in Mexico. Our local manufacturers are eager to grow their business beyond Mexico, especially into the United States.

El Paso Makes' Innovation Network for Manufacturers will advance El Paso businesses onto new opportunities in the Department of Defense, NASA and aerospace and defense buyers through a searchable web-based platform showcasing the capabilities of El Paso business suppliers, through trade shows and through targeted trips to large aerospace and defense markets.

El Paso Makes' Innovation Hub Network for Manufacturers will host an annual supplier summit to facilitate face-to-face engagement between El Paso suppliers and the Department of Defense, NASA and aerospace and defense buyers. The summit would provide an opportunity for El Paso suppliers to learn directly from the Department of Defense, NASA and aerospace and defense buyers about how to do business with the agencies or businesses. The summit would also provide a format for buyers to meet and learn about each of our El Paso suppliers and the strengths of our supply base.

El Paso Makes will also host a monthly meeting of El Paso suppliers with potential customers to facilitate introductions into the aerospace and defense supply chain.

Section 3b: Achievable Solution

With funding from the EDA and the rich network of public sector and private sector collaborators that we have assembled, the creation of the Aerospace and Defense Supply Chain Innovation Network for Manufacturers as a one-stop resource for manufacturers is achievable and will create significant value for El Paso's economy in the form of high paying STEM occupations and new business opportunity. The Chamber has already been supplying general business coaching and procurement support and can testify to the positive impact of these effort as well as the need for further investment. We have also created some components of this effort already with the EDA funded Innovation Acceleration Park (tRIAC) at the County's Fabens Airport and the Aerospace and Defense associate degree created at Western Technical College in partnership with UTEP. The Aerospace Center and Keck Center have spun off several start-up businesses taking advantage of their frontier technologies. Our effort has lacked the necessary dedicated resources and staffing to fully support our local suppliers to take advantage of growth opportunities in aerospace, defense and advanced manufacturing.

Both the Aerospace Center and Keck Center have deep connections with the aerospace and defense industry and have heard directly from their diversity supply managers what some of the supply chain gaps and needs are. From our visits and engagement with local manufacturers, we have assessed their technical capabilities and strengths and are confident that with the appropriate resources and customized support that

they will be able to successfully compete for business in aerospace and defense and become strategic partners in strengthening the United States industrial base. The program of services and resources that will be available through the Aerospace and Defense Supply Chain Innovation Network for Manufacturers were built from this assessment and from our engagement with local suppliers.

Section 3c: Stakeholder Groups

Through the El Paso Chamber, El Paso Makes has identified 70 companies with operations in El Paso who would benefit from the program and resources that will be available via our Aerospace and Defense Supply Chain Innovation Network for Manufacturers. The target participants were selected because they are challenging the status quo in manufacturing that relies primarily on low-cost labor markets to be competitive. We included companies that were locally owned or were medium-sized American companies with substantial manufacturing operations in El Paso. We included manufacturing companies that are currently deploying advanced manufacturing technologies or selling to industries who are rapidly adopting advanced manufacturing technologies to increase their competitiveness. These companies range from additive manufacturing start-ups to small- and medium-sized companies.

The additive manufacturing start-ups spun out of the Keck Center are poised to take advantage of the shifts in design and manufacturing that this technology promises. Our small- and medium-sized manufacturers primarily serve the very large manufacturing base in Mexico, whose strength is in the automotive, appliance and medical industries. Most of their competitors are in Mexico. These suppliers cannot compete with these competitors on price because of the significant wage differential between the two cities so they have built a competitive advantage based on higher productivity afforded by advanced manufacturing technologies. This competitive advantage as well as our high supplier resiliency, provides a strong foundation to grow into other industries to include aerospace and defense.

Reflecting the demographics of El Paso which is 83% Latino, most of the locally owned companies are minority-owned or women-owned businesses. Some are family-owned businesses with generations of family members employed by the business. All of the companies that we have engaged with have demonstrated significant technical capabilities and resilience even through the COVID-19 pandemic. These businesses are all eager to grow into new markets and earn new customers.

These 70 companies will be our initial target for El Paso Makes' Innovation Network. As we learn about other companies in their networks, we will reach out to them, make an assessment of their capabilities and interest and offer services and support.

The program, services and resources that will be available through the El Paso Makes Innovation Network were designed to increase business and by doing so create quality jobs in El Paso, Texas.

Section 4: Partnerships

Section 3a: Partnership Ecosystem

El Paso Makes is a consortium led by the applicant, University of Texas at El Paso's Aerospace Center (cSETR) and W.M. Keck Center for 3D Innovation, and the El Paso Chamber. The consortium includes the County of El Paso, the City of El Paso, the City of Horizon, Workforce Solutions Borderplex, Western Technical College and the National Center for Defense Manufacturing and Machining (NCDMM)/America Makes. This group of partners has been working together over the last two years to develop a strategy and the necessary resources to create jobs and business opportunity in aerospace, defense and advanced manufacturing. The partners were

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convened by the Office of Congresswoman Veronica Escobar initially and now will be regularly connected through the El Paso Chamber's committee on Aerospace, Defense and Advanced Manufacturing.

The University of Texas at El Paso's Aerospace Center (cSETR) and W.M. Keck Center for 3D Innovation, and the El Paso Chamber created a formal partnership in December 2020 contracting a full-time consultant to identify local manufacturers and defense contractors poised for growth into new industries. We surveyed 40 of these companies and have visited 20 of them to assess their current capabilities, to learn more about their goals and what we can do to support their growth and development into aerospace and defense markets. We created a supplier database that will be used to populate our marketing materials and searchable website. We documented the challenges identified by local suppliers and our assessment of their capabilities and what additional steps each would need to take to be ready to compete for new business in aerospace and defense.

UTEP's Aerospace Center will administer and manage grant proceeds for the El Paso Makes' Innovation Network for Manufacturers. The Aerospace Center and the Keck Center will provide technical assistance, research and engineering support to the Innovation Hub through the Design Center. They will also work with our workforce partners to match the industry's talent needs with student interns.

The El Paso Chamber will design the business services program and will be a subrecipient of the Venture Challenge Grant with the responsibility of providing coaching and mentoring support to participating businesses.

In 2017, the County of El Paso and UTEP were granted an EDA i6 Challenge Grant to assist with the development of the Innovation Acceleration Park (tRIAC) at the County's airport in Fabens, Texas. This collaboration continues with a recent request to the EDA for money to construct additional hangars to support this work.

The County and the City of El Paso have identified Aerospace, Defense and Advanced Manufacturing as priority target industries for business expansion and attraction efforts. The County, the City of El Paso and the City of Horizon will work with El Paso Makes to identify direct support for targeted business such as tax incentives or grants that would support their growth in El Paso. The City of El Paso will provide matching funds and has dedicated digital marketing dollars that they have been earmarked to promote El Paso's aerospace, defense and advanced manufacturing ecosystem.

Workforce Solutions Borderplex has identified Aerospace, Defense and Advanced Manufacturing as priority target industries for workforce investment and will work with El Paso Makes to create and fund customized industry training and internship and apprenticeship programs that support industry needs and provide learn and work opportunities for El Pasoans in high demand occupations.

Western Technical College, a private technical school, has partnered with UTEP to create an associate degree in Aerospace and Defense. This degree was designed to allow a student to articulate to UTEP's engineering program. Western Technical College will work with El Paso Makes to create customized training to support industry growth in aerospace and defense and to place interns from their Aerospace and Defense program to support industry needs.

The National Center for Defense Manufacturing and Machining (NCDMM)/America Makes opened a satellite of America Makes at UTEP's Keck Center in 2015. El Paso Makes would contract the National Center for Defense Manufacturing and Machining (NCDMM) to create a presence here in El Paso to assist local manufacturing businesses in identifying and developing proposals to address DoD opportunities. Additionally, NCDMM has established DoD accounting practices and contracting vehicles that can be utilized to rapidly accept DoD contracts, alleviating the need for small, local businesses to establish government-approved accounting systems and a lengthy contracting timeline, which commonly requires up to two years and significant costs.

Section 5: Measurable Goals & Feasibility

El Paso Makes' goal is to create 3,500 new engineering and technologist positions and 12,000 technical positions by 2030 in aerospace, defense and advanced manufacturing. This job creation strategy requires sustained investment in building programs that leverage our robust innovation ecosystem in aerospace, defense and advanced manufacturing to support our local manufacturers.

El Paso Makes has identified 70 local manufacturers who are uniquely poised for robust growth in the aerospace and defense industry. Our goal is to serve these manufacturers through the Innovation Network. Strengthening our local supply base will make El Paso more competitive in attracting aerospace and defense employers to the region.

Program Activities	Metrics
Output	<ul style="list-style-type: none"> By August 2024, 70 local manufacturers will be participating in the Innovation Network. By August 2024, the Innovation Network will market and connect to the national aerospace and defense industrial base 70 local manufacturers. By August 2024, the Innovation Network will host 3 annual supplier summits. By August 2024, the Innovation Network will organize 12 trips to market El Paso suppliers to the aerospace and defense industry. By August 2024, the Innovation Network will provide customized services to increase the innovation, business and technical capabilities of 70 local manufacturers.
Outcome	<ul style="list-style-type: none"> By August 2024, the Innovation Network will ensure that 60 of our local manufacturers have been quality certified to compete for aerospace and defense business. By August 2024, the Innovation Network will ensure that 60 of local manufacturers are prepared to successfully compete for DoD and NASA contracts. By August 2024, the combined annual revenue of manufacturers receiving services and support from the Innovation Network will increase by 10%. By August 2024, manufacturers receiving services and support from the Innovation Network will collectively add 200 new jobs to the El Paso economy.

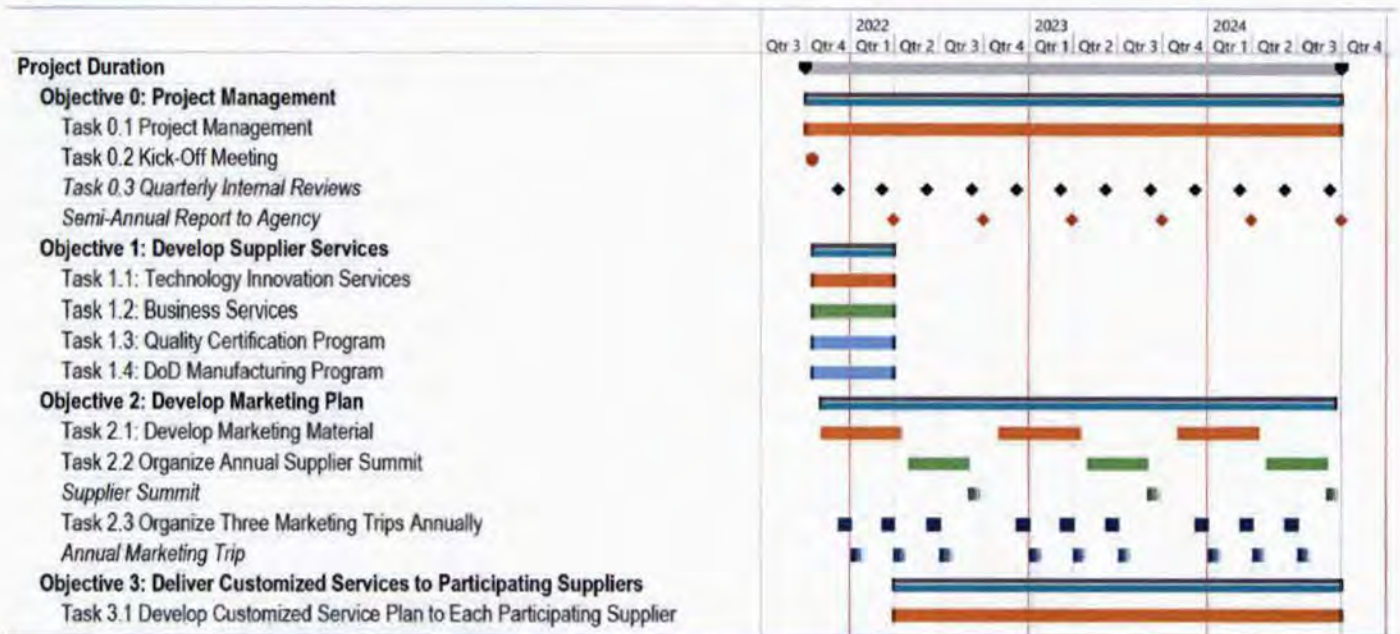
The El Paso Chamber's existing customer management system will be customized by the Innovation Network to develop a profile of all participating companies and their capabilities and needs, to track participation by each company in the Innovation Network's events and services and to track all outcomes to include whether they achieved quality certification to compete for aerospace and defense business, whether they are prepared to successfully compete for DoD and NASA contracts and to track their annual employment and annual revenue.

In addition, the project will use Key Performance Indicators (KPI) assigned to two general categories: i) Stakeholder Engagement and ii) Quantitative Deliverables. The project administration will integrate the KPIs with the project milestones and metrics using Project Management tools to monitor the progress of the project. The project management tool will contain schedules for each task and milestones for those tasks and will be updated monthly. Tasks will be scheduled to take no longer than three months and progress reporting will be done on a 0/50%/100% basis. Each quarter, tasks within the project will be reviewed by team members to ensure an effective project operation. Project Milestones and Key Performance Indicators and a preliminary project Gantt chart are shown below.

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Project Milestone and Key Performance Indicators

No	Milestones	Key Performance Indicator (KPI)
M1	Development of supplier services	KPI M1.1: Development of supplier services KPI M1.2: Development of customized service plans for participants
M2	Innovation and Business Capacity Development	KPI M2.2: Number of Workshops Organized KPI M2.2: Number of Workshop Attendees KPI M2.3: Number Small Businesses receive quality certification KPI M2.4: Number of DoD Bids Submitted and Awarded KPI M2.5: Number of New Jobs KPI M2.6: Value of New Business
M3	Development of marketing plan	KPI M3.1: Number of local suppliers at annual supplier summit KPI M3.2: Number of marketing trips KPI M3.3: Number of new leads for local suppliers as a result of marketing efforts



Section 6: Sustainability

El Paso Makes views these funds as a means to prime the funding pump locally. It is our belief; that success will lead to more success. Proving the concept and setting up the Innovation Network will lead to more business funding as well as other public funding as we rebuild and reimagine our economy. The proposed El Paso Makes will be developed within the paradigm of strong institutional and regional stakeholder cash and in-kind commitments. The City of El Paso has committed to provide \$1,500,000 support for as well as physical infrastructure needed to support this initiative. The City of El Paso and the El Paso Chamber commit to maintain high level of support beyond the initial EDA funding. The El Paso Chamber will also develop an additional \$5 million fund through its foundation within the 3 years of the project. Thus, most program elements of proposed initiative will sustain and grow beyond the EDA funding cycle.