

Application for Federal Assistance

ID: 2898602
Applicant Name: Tennessee Technological University
Project Title: TN Tech Rural Venture Initiative (RVI)
Project Period: 08/01/2020 - 07/31/2023
Federal Funding Requested: \$623,061.00
Non-Federal Funding Requested: \$623,061.00
Fiscal Year of Funding Requested: 2020
Federal Application Receipt Date: 06/12/2020
Submitted for: FY 2020 Build to Scale Program
Notice of Funding Opportunity Number: EDA-HDQ-OIE-2020-2006455
CFDA Number: 11.020

Application Documents for Review

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This Application Report has non-PDF or "PDF Catalog" embedded attachments. To print the entire application, each embedded attachment must be opened and printed separately.

This Application Report was produced by DoC Grants Online (<https://grantsonline.rdc.noaa.gov>) on 06/25/2020 04:55 PM EDT

Tennessee Technological University Budget Narrative and Staffing Plan
(Staffing Plan begins on page 7)
TN Tech Rural Venture Initiative

Project Dates: August 1, 2020 through July 31, 2023

Labor rates for personnel are set strictly by their current rate of pay at Tennessee Tech University (TN Tech). One month is 162.5 hours and one week is 37.5 hours. Undergraduate student workers may be paid an hourly wage between the federal and state minimum wage of \$7.25 and a maximum of \$12. Pay rates above \$12 per hour require the agency approval and will be clearly outlined below as needed.

TTU defines “year” as their state fiscal year from 7/1 to 6/30. All budgetary figures have been rounded to the nearest dollar.

PERSONNEL | FEDERAL SHARE: \$156,036 NON-FEDERAL SHARE: \$144,477

The Principal Investigator, Mr. Michael Aikens, TCRI PI and Director, will be responsible for program direction, implementation, reporting, and success. TN Tech will afford the PI’s involvement through a percentage of his university effort share in consideration that no award funds will be utilized for his project involvement. This is also the case for the project CoPIs Drs. Andy Pardue, Ashley Akenson and George Chitiyo who roles and responsibilities are outlined in the staffing planned attached.

This project will utilize award funding to create a full-time job with options for health insurance for a Program Coordinator. The budget allows for a starting annual salary of \$40,000.

Funds for potentially 20 undergraduate students have been budgeted at \$10,800 per year. The students have been budgeted to work approximately 6 hours per week at an hourly rate of \$12 per hour for 15 weeks. The rate will be determined depending upon the complexity of the task being performed and the level of student.

Below is a plan that lists all positions charged to the Federal and matching portions of the budget for each year of the of proposed grant performance period.

Name	Annual Salary	Total Federal Share Year 1	Total Federal Share Year 2	Total Federal Share Year 3	Percentage of Dedictaed Time	Total Federal Share
Project Coordinator	\$ 40,000.00	\$ 40,000.00	\$ 41,200.00	\$ 42,436.00	100.00%	\$ 123,636.00
Student Interns	\$ 10,800.00	\$ 10,800.00	\$ 10,800.00	\$ 10,800.00	100.00%	\$ 32,400.00
Name	Annual Salary	Total Non-Federal Share (Matching) Year 1	Total Non-Federal Share (Matching) Year 2	Total Non-Federal Share (Matching) Year 3	Percentage of Dedictaed Time	Total Non-Federal Share
Michael Aikens	\$ 76,970.00	\$ 11,545.00	\$ 11,891.00	\$ 12,248.00	15.45%	\$ 35,684.00
Andy Pardue	\$ 68,000.00	\$ 2,604.00	\$ 2,682.00	\$ 2,762.00	3.95%	\$ 8,048.00
Ashley Akenson	\$ 77,984.00	\$ 2,000.00	\$ 2,060.00	\$ 2,122.00	2.64%	\$ 6,182.00
George Chitiyo	\$ 77,243.00	\$ 2,641.00	\$ 2,720.00	\$ 2,802.00	3.52%	\$ 8,163.00
(2) Graduate Students	\$ 28,800.00	\$ 28,800.00	\$ 28,800.00	\$ 28,800.00	100.00%	\$ 86,400.00

FRINGE BENEFITS | FEDERAL SHARE: \$55,636 NON-FEDERAL SHARE: \$64,149

Benefits include FICA, Medicare, Group Insurance, and Retirement and are estimated at 45% for the Program Coordinator. Single coverage health insurance would be 35.56% and Employee+Spouse+Child health insurance coverage would be 53.47%. We have budgeted the average of these two percentages since it is unknown at this time who will fill the position. Below is a chart of the fringe rate calculations and dollar values associated with each member per year.

Name	Fringe Rate	Total Federal Share Year 1	Total Federal Share Year 2	Total Federal Share Year 3	Total Federal Share
Project Coordinator	45%	\$ 18,000.00	\$ 18,540.00	\$ 19,096.00	\$ 55,636.00
Name	Fringe Rate	Total Non-Federal Share (Matching) Year 1	Total Non-Federal Share (Matching) Year 2	Total Non-Federal Share (Matching) Year 3	Total Non-Federal Share
Michael Aikens	26.96%	\$ 3,113.00	\$ 3,206.00	\$ 3,302.00	\$ 9,621.00
Andy Pardue	16.72%	\$ 702.00	\$ 723.00	\$ 745.00	\$ 2,170.00
Ashley Akenson	25.07%	\$ 539.00	\$ 555.00	\$ 572.00	\$ 1,666.00
George Chitiyo	36.20%	\$ 712.00	\$ 733.00	\$ 756.00	\$ 2,201.00
(2) Graduate Students	N/A	\$ 15,699.00	\$ 16,159.00	\$ 16,633.00	\$ 48,491.00

	Michael Aikens	Andy Pardue	Ashley Akenson	George Chitiyo
Monthly Gross:	\$ 6,414.17	\$ 5,666.67	\$ 6,498.67	\$ 6,436.92
401K:	\$ 50.00	\$ -	\$ -	\$ 50.00
Health Premiums:	\$ 543.00	\$ -	\$ 543.00	\$ 1,140.00
Basic Life Ins:	\$ 3.96	\$ 3.96	\$ 3.96	\$ 3.96
	\$ 596.96	\$ 3.96	\$ 546.96	\$ 1,193.96
Insurance	9.31%	0.07%	8.42%	18.55%
Retirement:	10.00%	9.00%	9.00%	10.00%
FICA & Medicare:	7.65%	7.65%	7.65%	7.65%
Fringe Rate:	26.96%	16.72%	25.07%	36.20%

No fringe benefits are charged on graduate student stipends. The Graduate Student Maintenance Fees are paid from Employee Benefits and are budgeted for the Ph.D. graduate students for each of the three years of the project and are part of the Graduate Research Assistantships. The graduate student maintenance fees are estimated to be \$7,678 per graduate student appointed full time during academic Year 1. Fees are calculated at the in-state rate of 6 credit hours each semester and include a \$25/credit hour special course fee for those enrolled in Education courses. While current rates are published on the TTU website, the calculation for fees includes an expected increase of 3% each year.

These rates are not negotiated with the Division of Cost Allocation in the US Department of Health and Human Services, but are based on actual benefits paid as a percentage of salary. The project will be charged actual expenses.

TRAVEL | FEDERAL SHARE: \$9,454 NON-FEDERAL SHARE: \$0

Travel costs are set by the State of TN Dept. of Finance and Administration regulations and Tennessee Tech policy with all in-state travel having its special set of limits. At present mileage is reimbursed at the rate of \$0.47/mile. Funds will also be used to reimburse mileage for visits to counties within the Upper Cumberland. TN Tech Water Center Motor pool cars will be utilized when the round-trip mileage is less than 80 miles. Rental cars will be utilized when either the round-trip mileage is over 80 miles, or overnight travel is required. The total Federal Share budget for client mileage \$700 per year for a total of \$2,100.

THE RVI staff wishes to attend the annual UEDA summit conference in September 2020, 2021, and 2022. Funds will be used to travel to the conference. One RVI staff member, the project coordinator, will attend the summit to gain valuable insights from the conference proceedings, network with other attendees to discover and share best practices, and to learn about ways to collaborate on research and publications. Additional benefits of the summit include: building a learning network of colleagues to identify opportunities, develop partnerships, and ultimately, tailor and apply best practices to our respective communities and organizations; share success stories and lessons learned with economic development professionals from centers, organizations, colleges and universities nationwide; gain the latest strategic insights on the ever-changing and vital roles of colleges and universities in local, regional national and international economic development; examine the cutting-edge practices of colleagues as they compete for Awards of Excellence, and to learn how RVI can compete for Awards of Excellent in subsequent years. Conference travel is being budgeted for the below conference. Locations have been estimated based on historical event locations. Hotel rates are based on conference rates. Airfare is based on airlines such as Jet Blue and Southwest airlines Business Select rates.

UEDA Summit 2020 | September 21-24, 2020 | Savannah, GA

Trips:		Days:		No. of Pls/Project Team:		1
1		4		No. of Students:		-
Airfare Roundtrip	Meals	Hotel	Ground Transportation + Parking	Registration Fee	Total Costs	
\$ 358.00	\$ 244.00	\$ 660.00	\$ 169.00	\$ 690.00	\$ 2,121.00	

UEDA Summit 2021 | September 2021 | Estimated based on: Los Angeles, CA

Trips:		Days:		No. of Pls/Project Team:		1
1		4		No. of Students:		-
Airfare Roundtrip	Meals	Hotel	Ground Transportation + Parking	Registration Fee	Total Costs	
\$ 586.00	\$ 264.00	\$ 800.00	\$ 150.00	\$ 690.00	\$ 2,490.00	

Trips:	Days:	No. of Pls/Project Team:		1	
1	4	No. of Students:		-	
Airfare Roundtrip	Meals	Hotel	Ground Transportation + Parking	Registration Fee	Total Costs
\$ 407.00	\$ 304.00	\$ 1,192.00	\$ 150.00	\$ 690.00	\$ 2,743.00

EQUIPMENT | FEDERAL SHARE: \$0 NON-FEDERAL SHARE: \$0

No equipment requested. To meet the definition of equipment, the property must have a useful life of more than a year and an acquisition cost of more than \$5,000 per unit.

SUPPLIES | FEDERAL SHARE: \$16,690 NON-FEDERAL SHARE: \$0

Print materials such as brochures and fliers will be purchased for the purpose of generating awareness about the Rural Venture Initiative services within the service area. Promotional materials will be purchased for the purpose of generating awareness about the Rural Venture Initiative services within the service area. A computer will be purchased for use by the Project Coordinator. Software purchases include: (a) yearly license for Microsoft Windows and 365 Office applications and a yearly license for Adobe Creative Cloud. Creative Cloud will be used to: create digital/print marketing materials to facilitate the project's outreach and engagement plan and to provide design, coding, and digital technical assistance for the project's clients. Office supplies include, paper, pens, etc. An itemized list has been provided below.

Name	Total Federal Share Year 1	Total Federal Share Year 2	Total Federal Share Year 3	Total Federal Share
Office Supplies	\$ 250.00	\$ 250.00	\$ 250.00	\$ 750.00
Marketing Supplies	\$ 5,000.00	\$ 3,600.00	\$ 3,600.00	\$ 12,200.00
Computer Program Coordinator	\$ 2,500.00			\$ 2,500.00
Adobe Creative Cloud (to include yearly renewal)	\$ 230.00	\$ 250.00	\$ 275.00	\$ 755.00
Microsoft Windows & 365 Office Applications (to include yearly renewal)	\$ 140.00	\$ 165.00	\$ 180.00	\$ 485.00
Total	\$ 8,120.00	\$ 4,265.00	\$ 4,305.00	\$ 16,690.00

CONTRACTUAL | FEDERAL SHARE: \$300,000 NON-FEDERAL SHARE: \$225,000

A sole source contract will be drafted with BGBO Co. The budget is based on \$50,000 per year and will include the following services. The project will afford funding to BGBO Co. to provide clients with consultation services that include monthly and ad-hoc in person (or remote) meetings with the intent to scale project clients towards commercialization. Consultation will be provided in the following forms: product strategies to transform ideas; leadership strategies; sales strategies; and marketing strategies to

bring in leads through modern, automated, and efficient protocols. Additional information provided in the staff plan attached.

The University will enter into a subaward agreement with The Biz Foundry. The budget is based on \$50,000 per year and will include the following services: an accelerator program designed to catalyze venture development, growth, and scale.

Activity	Activity Performed By	Hourly Rate	Hours Per Client	Total Project Clients	Project Total
Accelerator Workshops	TBF Coordinator	\$ 25	300	15	\$ 112,500
1 on 1 coaching meetings	Jeff Brown, CEO	\$ 25	100	15	\$ 37,500
					\$ 150,000

The Biz Foundry is an entrepreneurship center (with three locations within the service region) that provides entrepreneurial and accelerator support to local entrepreneurs, startups, and small businesses. The project will provide the Biz Foundry with funding to implement an accelerator program designed to catalyze venture development, growth, and scaling. The Biz Foundry will also provide in-kind match activities in the form of access to co-working space at each of its three locations within the project service area, marketing support, event-space access, in-person and virtual mentorship, travel to client locations, and facilitate meetings with potential investors. The Biz Foundry will conduct nine outreach and engagement events. The Biz Foundry will act as a lead-generation mechanism for the project. We project 5+ Biz Foundry concept leads per year for a total of 15 reviewed concepts.

The Biz Foundry will also provide \$150,000 (\$50,000 per year) in-kind match activities in the form of: access to co-working space at each of their three locations within the project service area; marketing support; event space access; in-person and virtual mentorship; travel to client locations; access to corporate consultation; and facilitate meetings with potential investors.

Source of Match	Service Donated	Quantity	Rate	Total Per Year
The Biz Foundry	Co work Space Rental - Cookeville (5 companies/12 months)	60	\$ 199.00	\$ 11,940.00
The Biz Foundry	Co work Space Rental - Sparta (5 companies/12 months)	60	\$ 199.00	\$ 11,940.00
The Biz Foundry	Co work Space Rental - McMinnville (5 companies/12 months)	60	\$ 150.00	\$ 9,000.00
The Biz Foundry	Event Access (Cookeville, McMinnville, Sparta)	38	\$ 25.00	\$ 950.00
The Biz Foundry	Mentor Volunteer Hours	250	\$ 25.00	\$ 6,250.00
The Biz Foundry	Volunteer Travel			\$ 1,795.00
The Biz Foundry	Staff Travel			\$ 2,500.00
The Biz Foundry	Project marketing/facilitate investor meetings	125	\$ 45.00	\$ 5,625.00
				\$ 50,000.00

TN Rural Development Fund CDFI (TNRDF) provides affordable capital to spur business growth and expansion in rural and economically distressed counties within the RVI project service area, stimulates business and economic growth through the provision of affordable capital, and creates financial infrastructures by leveraging private investment into low-income communities to improve the overall quality of life in the project service area. The TNRDF will provide in-kind services including: startup financial consultation, business financial analysis and advisement, risk assessment, SWOT analysis, legal consultation, commercialization consultation, and debt analysis. TNRDF will act as a lead-generation

mechanism for the project. We project 5+ TNRDF concept leads per year for a total of 15 reviewed concepts.

The in-kind support will be \$25,000 per year for a total of \$75,000 for the life of the project.

In-Kind Support	Professional Blended Hourly Rate	Hours Per Client	Cost per Client	Total Clients	Total Budgeted In-Kind Support
Startup Financial Consultation	\$ 250	4	\$ 1,000	15	\$ 15,000
Business Financial Analysis and Advisement	\$ 250	4	\$ 1,000	15	\$ 15,000
Risk Assessment/SWOT Analysis	\$ 250	4	\$ 1,000	15	\$ 15,000
Legal/Commercialization Consultation	\$ 250	4	\$ 1,000	15	\$ 15,000
Debt Analysis	\$ 250	4	\$ 1,000	15	\$ 15,000
					\$ 75,000

OTHER | FEDERAL SHARE: \$2,235 NON-FEDERAL SHARE: \$0

The RVI project wishes to join the University Economic Development Association (UEDA) Membership will benefit the project in many ways. Membership will allow RVI to: collaborate with private sector, higher education and economic development policy leaders; become eligible for the UEDA Awards of Excellence recognition; gain access to all UEDA Affinity programs and member discounts through affiliated partners; receive member discounted rates for UEDA's annual summit, workshops and programming; collaborate on grants and regional initiatives with member organizations; contribute editorial content to UEDA's newsletter and blog; share and Participate in Best Practice competitions; present at the Annual Summit; contribute to and receive UEDA's journal publications. This is \$645 per year.

The free, open source, web-based application "CiviCRM" will serve as the Data and Client Management System. CiviCRM is a proven platform specifically designed for non-profit administration and grant management activities. CiviCRM will allow tracking of all project metrics in a machine-readable format. The project will purchase yearly web hosting to deploy the CiviCRM platform. This is \$100 per year.

TOTAL DIRECT CHARGES | FEDERAL SHARE: \$540,051 NON-FEDERAL SHARE: \$433,626
INDIRECT CHARGES | FEDERAL SHARE: \$83,010 NON-FEDERAL SHARE: \$189,435

Tennessee Tech's current predetermined federally approved on-campus Facilities and Administrative Cost rate as approved by the Department of Health and Human Services effective July 1, 2017 through June 30, 2021 is 42% of Modified Total Direct Costs. As the University has done on prior EDA funded awards, we are using a rate of 20% of MTDC as approved by the Interim VP Research and the unrecovered indirect costs will serve as part of the Universities match commitment. The Modified Total Direct Costs are the Total Direct Costs less capital expenditures (buildings, individual items of equipment, alterations and renovations), that portion of each subaward in excess of \$25,000 and flow-through funds and any third party in-kind support.

TOTAL PROJECT:

FEDERAL SHARE: \$623,061

NON-FEDERAL SHARE: \$623,061

Rural Venture Initiative Staffing Plan

Mr. Michael Aikens, Principal Investigator/Director (PI). Mr. Aikens is the current PI/Director of the EDA UC program “TN Tech Center for Rural Innovation.” Mr. Aikens will serve as the PI of the RVI project and will be responsible for project direction, implementation, reporting, and success. TN Tech will afford the PI’s involvement through a percentage of his university effort share in consideration that no award funds will be utilized for his project involvement. Additionally, Mr. Aikens will connect and leverage related TN Tech initiatives into the project, including TCRI, Rural Reimagined, Eagle Works, and the TN Tech Tomorrow Strategic Plan. Mr. Aikens will identify opportunities for new project partnerships and university collaborators.

Project Coordinator. We will utilize award funding to create a new full-time, benefitted Coordinator job position. The Coordinator responsibilities will include, but are not limited to, assisting with all aspects of the project such as deploying marketing, outreach, and engagement strategies; coordinating technical assistance meetings; overseeing student interns and connecting them with employers; project tracking and reporting through data and client management system; and facilitating the project’s expansion, iteration, and improvement.

Dr. Byron Pardue, Project Co-PI. Dr. Pardue, a lecturer in the Mechanical Engineering Department where he teaches senior level design courses, has held various engineering management roles in the past 24 years, has served as a business mentor to the NSF I-Corps program, and holds 13 US patents. Dr. Pardue will facilitate the MSME/MBA research design, master’s graduate assistant advisement, connections to industry, and project integration with capstone courses.

Dr. George Chitiyo, Project Co-PI. Dr. Chitiyo is a professor of Educational Research and Evaluation in the College of Education at TN Tech. Dr. Chitiyo teaches courses in research methods, statistics, and program evaluation; evaluates several National Science Foundation-funded projects, including Advanced Technological Education; and provides research mentorship to graduate students. Dr. Chitiyo will facilitate graduate doctoral student advisement and collaborate on PPE research design.

Dr. Ashley B. Akenson, Project Co-PI. Dr. Akenson is the Director of Graduate Programs for the College of Education at TN Tech and the Interim Associate Director for Institutional Assessment, Research, & Effectiveness. Dr. Akenson works in program planning and evaluation (PPE) and administration in academic healthcare, higher education, government, finance, and small business; has served as a grant writer; and is a PPE consultant and/or evaluator for numerous projects, including small business projects, academic initiatives, and federal grants. Dr. Akenson will facilitate graduate doctoral student advisement and collaborate on PPE research design.

TN Tech Graduate Students. A PPE Ph.D. doctoral student, advised by Drs. Chitiyo and Akenson, will collaborate in PPE research design components for the project. An MSME/MBA graduate student, advised by Dr. Pardue, will collaborate in MSME/MBA research design components for the project’s commercialization of technology into rurally focused economic development.

Mr. Jeff Brown, Executive Director/President of The Biz Foundry. Mr. Brown will bring 25 years of entrepreneurial experience to the project. Jeff has started and managed five different businesses, including a large real estate operation, a development company, a construction company, a mortgage operation, and full-service insurance business. Mr. Brown will operationalize the accelerator program and provide project clients with critical connections to mentor and investor networks. Mr. Brown will also oversee injection of Biz Foundry in-kind match sources into the project.

Mr. Micah Johnson, CEO of BGBO Co. Mr. Johnson will bring to the project over 18 years of experience in bootstrapping, fundraising, and advising organizations that range from 1 to 100 employees, earn \$10M+ in revenue, and are valued at up to \$17 billion. Mr. Johnson will provide project clients with

monthly and ad-hoc, in-person (or remote) consultation/coaching services and project management assistance that is custom designed for each client to catalyze the client's ventures throughout build and scale phase programming.

Mr. David Allen, President of TN Rural Development Fund CDFI. Mr. Allen is the founding partner of the Tennessee Rural Development Fund (TNRDF) and has advised domestic clients on a broad range of transactions across various sectors, including medical, banking, construction, retail, transportation, recreation, and agriculture. Prior to his experience in finance and investments, Mr. Allen owned a construction company with locations in Tennessee and Florida. Mr. Allen will provide in-kind financial assessment and advisement services as a source of cash match. Mr. Allen will also oversee injection of TN Rural Development Fund in-kind match sources into the project.

Project Team Structure

Essential partners will collaborate across diverse project teams that have specific roles and expected outcomes. The project will leverage our service area's existing intellectual and physical resources to scale existing EDA, TN Tech, and community programming and resources. The following sub-sections describe how our personnel and partners will collaborate in their respective teams and leverage community resources and auxiliary partners.

Core team: This team will lead daily operations, deploy mission critical resources, and ensure implementation success and maximization of grant funds. TN Tech internal core team members include the project PI, project coordinator, and faculty researcher Co-PI's. Community core team members include The Biz Foundry (accelerator program), BGBO Co (scale consultation), and TNRDF (financial advisement and coaching).

Support team: This team will provide programmatic support; concept reviews; technical assistance; internships and experiential/co-curricular opportunities; mentorship; access to capital and investments; in-kind legal and IP counsel; communications and storytelling. TN Tech internal support team members include the TCRI program associates and interns; project technical assistance student interns; and Rural Reimagined graduate student and undergraduate interns. Community support team members include the UCDD; TSBDC; "Master Mind" mentor network; Attorney Network; Capital and Investor Network; LaunchTN; Tennessee Department of Economic & Community Development; Tennessee Rural Development.

Research & Academia Team: This team facilitates program research, commercialization assistance, knowledge transfer, and connections to curriculum and research. TN Tech internal research & academia team members are the Office of Research and Economic development staff; courses that generate intellectual property (IP); TN Tech Centers of Excellence; Colleges of engineering, business, nursing, arts & sciences, and graduate studies; graduate student applied research in the fields of PPE and Engineering; faculty researchers; Graduate Assistant advisers; and Co-PI's. External research and academia team members include project clients who will generate student and faculty research opportunities and problem-solving experiences for capstone courses and competitions.

Venture team: This team discovers qualified leads and acts as a feeder mechanism to the program. TN Tech internal venture team members include NSF I-Corps; Eagle Works; IP generating courses; and faculty or students creating commercializable research. Community venture team members are the UCDD; TSBDC; TNRDF; government and public officials; and the Upper Cumberland Chamber Executives Association.



DEPARTMENT OF HEALTH & HUMAN SERVICES

Program Support Center
Financial Management Portfolio
Cost Allocation Services

7700 Wisconsin Avenue, Suite 2301
Bethesda, MD 20814
PHONE: (301) 492-4855
FAX: (301) 492-5081
EMAIL: CAS-Bethesda@psc.hhs.gov

March 23, 2017

Mr. Francis Otunye
Associate Vice President for Research
Tennessee Technologic University
Box 5036
1 William L. Jones Drive
Cookeville, TN 38505

Dear Mr. Otunye:

A copy of an indirect cost rate agreement is being sent to you for signature. This agreement reflects an understanding reached between your organization and a member of my staff concerning the rate(s) that may be used to support your claim for indirect costs on grants and contracts with the Federal Government.

Please have the agreement signed by an authorized representative of your organization and return to me by email, retaining the copy for your files. Our email address is CAS-Bethesda@psc.hhs.gov. We will reproduce and distribute the agreement to the appropriate awarding organizations of the Federal Government for their use.

An indirect cost proposal, together with the supporting information, is required to substantiate your claim for indirect cost under grants and contracts awarded by the Federal Government. Thus, your next proposal based on actual costs for the fiscal year ending 06/30/2020 is due in our office by 12/31/2020. Please submit your next proposal electronically via email to CAS-Bethesda@psc.hhs.gov.

Sincerely,
Darryl W.
Mayes -A

Revised: 10/12/10 (Rev) 10/12/10
10/12/10 10/12/10 10/12/10 10/12/10
10/12/10 10/12/10 10/12/10 10/12/10

Darryl W. Mayes, Deputy Director
Cost Allocation Services

Enclosure

PLEASE SIGN AND RETURN THE NEGOTIATION AGREEMENT BY EMAIL

COLLEGES AND UNIVERSITIES RATE AGREEMENT

EIN: 1620646806A1

DATE: 03/23/2017

ORGANIZATION:

FILING REF.: The preceding
agreement was dated
09/06/2013

Tennessee Technological University

P.O. Box 5037

Cookeville, TN 38505-0001

The rates approved in this agreement are for use on grants, contracts and other agreements with the Federal Government, subject to the conditions in Section III.

SECTION I: Facilities And Administrative Cost Rates

RATE TYPES: FIXED FINAL PROV. (PROVISIONAL) PRED. (PREDETERMINED)

EFFECTIVE PERIOD

<u>TYPE</u>	<u>FROM</u>	<u>TO</u>	<u>RATE(%)</u>	<u>LOCATION</u>	<u>APPLICABLE TO</u>
PRED.	07/01/2017	06/30/2021	42.00	On-Campus	All Programs
PRED.	07/01/2017	06/30/2021	11.50	Off-Campus	All Programs
PROV.	07/01/2021	Until Amended			Use same rates and conditions as those cited for fiscal year ending June 30, 2021.

*BASE

Total direct costs excluding capital expenditures (buildings, individual items of equipment; alterations and renovations), that portion of each subaward in excess of \$25,000 and flow-through funds.

ORGANIZATION: Tennessee Technological University

AGREEMENT DATE: 3/23/2017

SECTION II: SPECIAL REMARKS

TREATMENT OF FRINGE BENEFITS:

The fringe benefits are specifically identified to each employee and are charged individually as direct costs. The directly claimed fringe benefits are listed below.

TREATMENT OF PAID ABSENCES

Vacation, holiday, sick leave pay and other paid absences are included in salaries and wages and are claimed on grants, contracts and other agreements as part of the normal cost for salaries and wages. Separate claims are not made for the cost of these paid absences.

OFF-CAMPUS DEFINITION: For all activities performed in facilities not owned by the institution and to which rent is directly allocated to the project(s) the off-campus rate will apply. Grants or contracts will not be subject to more than one F&A cost rate. If more than 50% of a project is performed off-campus, the off-campus rate will apply to the entire project.

Fringe Benefits include: FICA, Retirement and Hospitalization Insurance.

Equipment means an article of nonexpendable tangible personal property having a useful life of more than one year, and an acquisition cost of \$5,000 or more per unit.

The four year extension of the indirect cost rate was granted in accordance with 2 CFR §200.414 (g).

Next proposal based on the fiscal year ending June 30, 2020 is due in our office by December 31, 2020.

BASES:

(1) Prior to 06/30/08, the base is Direct salaries and wages including vacation, holiday, sick pay and other paid absences but excluding all other fringe benefits.

(2) Effective 07/01/08, the base is Total direct costs excluding capital expenditures (buildings, individual items of equipment; alterations and renovations), that portion of each subaward in excess of \$25,000 and flow-through funds.

ORGANIZATION: Tennessee Technological University

AGREEMENT DATE: 3/23/2017

SECTION III: GENERAL

A. LIMITATIONS:

The rates in this Agreement are subject to any statutory or administrative limitations and apply to a given grant, contract or other agreement only to the extent that funds are available. Acceptance of the rates is subject to the following conditions: (1) Only costs incurred by the organization were included in its facilities and administrative cost pools as finally accepted; such costs are legal obligations of the organization and are allowable under the governing cost principles; (2) The same costs that have been treated as facilities and administrative costs are not claimed as direct costs; (3) Similar types of costs have been accorded consistent accounting treatment; and (4) The information provided by the organization which was used to establish the rates is not later found to be materially incomplete or inaccurate by the Federal Government. In such situations the rate(s) would be subject to renegotiation at the discretion of the Federal Government.

B. ACCOUNTING CHANGES:

This Agreement is based on the accounting system purported by the organization to be in effect during the Agreement period. Changes to the method of accounting for costs which affect the amount of reimbursement resulting from the use of this Agreement require prior approval of the authorized representative of the cognizant agency. Such changes include, but are not limited to, changes in the charging of a particular type of cost from facilities and administrative to direct. Failure to obtain approval may result in cost disallowances.

C. FIXED RATES:

If a fixed rate is in this Agreement, it is based on an estimate of the costs for the period covered by the rate. When the actual costs for this period are determined, an adjustment will be made to a rate of a future year(s) to compensate for the difference between the costs used to establish the fixed rate and actual costs.

D. USE BY OTHER FEDERAL AGENCIES:

The rates in this Agreement were approved in accordance with the authority in Title 2 of the Code of Federal Regulations, Part 200 (2 CFR 200), and should be applied to grants, contracts and other agreements covered by 2 CFR 200, subject to any limitations in A above. The organization may provide copies of the Agreement to other Federal Agencies to give them early notification of the Agreement.

E. OTHER:

If any Federal contract, grant or other agreement is reimbursing facilities and administrative costs by a means other than the approved rate(s) in this Agreement, the organization should (1) credit such costs to the affected programs, and (2) apply the approved rate(s) to the appropriate base to identify the proper amount of facilities and administrative costs allocable to these programs.

BY THE INSTITUTION:

Tennessee Technological University

(INSTITUTION)

(SIGNATURE)

(NAME)

(TITLE)

(DATE)

ON BEHALF OF THE FEDERAL GOVERNMENT:

DEPARTMENT OF HEALTH AND HUMAN SERVICES

(AGENCY)

Darryl W. Mayes -A

(SIGNATURE)

Darryl W. Mayes

(NAME)

Deputy Director, Cost Allocation Services

(TITLE)

3/23/2017

(DATE) 0282

HHS REPRESENTATIVE:

Steven Zuraf

Telephone:

(301) 492-4855



Office of Research TENNESSEE TECH

June 11, 2020

Program Officer
U.S. Economic Development Administration,
U.S. Department of Commerce
1401 Constitution Avenue, NW, Suite 71014
Washington, DC 20230

Program: EDA-HDQ-OIE-2020: 2020 Build to Scale Program
Proposal Title: Rural Venture Initiative
Principal Investigator: Mr. Michael Aikens

Dear Program Officer:

This letter confirms that Tennessee Technological University is pleased to participate in the research project referenced above being submitted to the U.S. Economic Development Administration in response to solicitation EDA-HDQ-OIE-2020: 2020 Build to Scale Program.

Tennessee Tech's participation will be under the direction of Mr. Michael Aikens, director of the Tennessee Center for Rural Innovation at Tech. A statement of work and detailed budget totaling \$623,061 for the project period of August 1, 2020, to July 31, 2023, as well as a budget justification, are attached to the grant application. Our standard negotiated Facilities and Administrative (F&A) cost rate is 42% of the modified total direct costs (MTDC). For this proposal, we are using a rate of 20% of MTDC. The total budget amount includes our direct costs, and also Tennessee Tech is committed to covering \$398,061 in match. The Tennessee Rural Development Fund will provide \$75,000 of match, and the Biz Foundry and the BGBO Co. will provide \$150,000 in match for a total project cost share of \$623,061. All matching funds from Tennessee Tech will be unencumbered, unrestricted, and committed at the time of award.

TTU is a public institution governed by the laws of the State of Tennessee. It is understood that implementation of any award will comply with those laws and the policies of TTU. TTU meets all required conditions for award of federal funds, and certifications will be provided upon request. TTU is audited as an entity of the state of Tennessee for purposes of Uniform Guidance (2 CFR 200.500) compliance. The latest report is available at <https://comptroller.tn.gov/content/dam/cot/sa/advanced-search/disclaimer/2020/2019SingleAudit.pdf>. The University is not delinquent, nor is the institution or any of its principals presently debarred, proposed for debarment, declared ineligible or voluntarily excluded from covered transaction by a federal department or agency. Other questions or matters relating to grant or contract administration should be addressed to:

Ms. Nicole Clark, Contract Compliance Assistant
Office of Research
Tennessee Technological University
Box 5164, Cookeville, TN 38505-0001
931-372-3202/ nclark@tntech.edu

We look forward to a pleasant and successful collaboration.

Sincerely,

Francis Otuonye, Ph.D.
Interim Vice President for Research and Economic Development
cc: College Dean



Imagine. Start. Grow

June 9, 2020

Jeff Brown, President
The Biz Foundry
114 N Cedar Ave
Cookeville, TN 38501

Re: Letter of Support for TN Tech Rural Venture Initiative

Dear Mr. Aikens,

I am pleased to confirm our enthusiastic support for Tennessee Technological University's (TTU) grant application through the Economic Development Administration's (EDA) Build to Scale Venture Challenge titled TN Tech Rural Venture Initiative (RVI). Please use this letter of support in verification that The Biz Foundry is fully committed to the provision of a total of \$150,000 in-kind match (over three years) services in support of TTU's RVI grant proposal. As the authorized representative for The Biz Foundry with the authority to execute documents and to obligate and expend funds on behalf of The Biz Foundry, I certify that our in-kind match commitment will be unencumbered, unrestricted, and committed at the time of award. I also certify that our in-kind match will be paid out at the same general rate as the Federal Share.

As President of The Biz Foundry, I can personally attest that RVI clients will greatly benefit from this project and our in-kind services. Our services will provide RVI clients with access to co-working space at each of our three locations within the project service area including Putnam County, White County, and Warren County; marketing support; event space access; in-person and virtual mentorship; travel to client locations; and access to corporate consultation and connections.

The Biz Foundry offers its full support of this project and highly recommends it to be funded by the EDA. We are genuinely excited about the opportunities this project will provide for our rural community. Please do not hesitate to contact me at jeff@thebizfoundry.org if you should have any questions or if you should need any additional information regarding our in-kind support of this grant application.

Sincerely,

Jeff Brown, President
The Biz Foundry

114 N Cedar Ave
Cookeville, TN 38501

60 Ridley St. Ste. 101
Crossville, TN 38555

931-210-5105

www.thebizfoundry.org



Stimulating Capital Ideas

Tennessee Rural Development Fund
121 Poplar Avenue
Cookeville, Tennessee 38501
TNRDF.COM

June 9, 2020

Mr. David Allen
President
Tennessee Rural Development Fund
121 Poplar Ave
Cookeville, TN 38501
Re: Letter of Support for TN Tech Rural Venture Initiative

Dear Mr. Aikens,

I am pleased to confirm our enthusiastic support for Tennessee Technological University's (TTU) grant application through the Economic Development Administration's (EDA) Build to Scale Venture Challenge titled TN Tech Rural Venture Initiative (RVI). Please use this letter of support in verification that the Tennessee Rural Development Fund (TNRDF) is fully committed to the provision of a total of \$75,000 in-kind match (over three years) services in support of TTU's RVI grant proposal. As the authorized representative for TNRDF with the authority to execute documents and to obligate and expend funds on behalf of TNRDF, I certify that our in-kind match commitment will be unencumbered, unrestricted, and committed at the time of award. I also certify that our in-kind match will be paid out at the same general rate as the Federal Share.

As the President of the TNRDF, I can personally attest that RVI clients will greatly benefit from this project and our in-kind services. The TNRDF will provide in-kind services including: startup financial consultation, business financial analysis and advisement, risk assessment, SWOT analysis, legal consultation, commercialization consultation, and debt analysis.

On behalf of the TNRDF Board of Directors, I offer my full support of this project and highly recommend it to be funded by the EDA. We are genuinely excited about the opportunities this project will provide for our rural community. Please do not hesitate to contact me at dallen@tnrdf.com if you should have any questions or if you should need any additional information regarding our in-kind support of this grant application.

Sincerely,

David Allen, President - TNRDF



Budget Narrative File(s)

* **Mandatory Budget Narrative Filename:**

Add Mandatory Budget Narrative

Delete Mandatory Budget Narrative

View Mandatory Budget Narrative

To add more Budget Narrative attachments, please use the attachment buttons below.

Add Optional Budget Narrative

Delete Optional Budget Narrative

View Optional Budget Narrative

Applicants should also review the instructions for certification included in the regulations before completing this form. Signature on this form provides for compliance with certification requirements under 15 CFR Part 28, 'New Restrictions on Lobbying.' The certifications shall be treated as a material representation of fact upon which reliance will be placed when the Department of Commerce determines to award the covered transaction, grant, or cooperative agreement.

LOBBYING

As required by Section 1352, Title 31 of the U.S. Code, and implemented at 15 CFR Part 28, for persons entering into a grant, cooperative agreement or contract over \$100,000 or a loan or loan guarantee over \$150,000 as defined at 15 CFR Part 28, Sections 28.105 and 28.110, the applicant certifies that to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, 'Disclosure Form to Report Lobbying,' in accordance with its instructions.
- (3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure occurring on or before October 23, 1996, and of not less than \$11,000 and not more than \$110,000 for each such failure occurring after October 23, 1996.

As the duly authorized representative of the applicant, I hereby certify that the applicant will comply with the above applicable certification.

*** NAME OF APPLICANT**

Tennessee Technological University

*** AWARD NUMBER***** PROJECT NAME**

TN Tech Rural Venture Initiative (RVI)

Prefix:

Dr.

*** First Name:**

Francis

Middle Name:*** Last Name:**

Otuonye

Suffix:

*** Title:** Interim Vice President for Research

*** SIGNATURE:**

Francis Otuonye

*** DATE:**

06/12/2020

Project Narrative File(s)

*** Mandatory Project Narrative File Filename:**

To add more Project Narrative File attachments, please use the attachment buttons below.

Application for Federal Assistance SF-424

* 1. Type of Submission:

- ☐ Preapplication
☒ Application
☐ Changed/Corrected Application

* 2. Type of Application:

- ☒ New
☐ Continuation
☐ Revision

* If Revision, select appropriate letter(s):

* Other (Specify):

* 3. Date Received:

06/12/2020

4. Applicant Identifier:

5a. Federal Entity Identifier:

5b. Federal Award Identifier:

State Use Only:

6. Date Received by State:

7. State Application Identifier:

8. APPLICANT INFORMATION:

* a. Legal Name:

Tennessee Technological University

* b. Employer/Taxpayer Identification Number (EIN/TIN):

62-0646806

* c. Organizational DUNS:

8786481530000

d. Address:

* Street1:

1 William L. Jones Drive

Street2:

* City:

Cookeville

County/Parish:

Putnam

* State:

TN: Tennessee

Province:

* Country:

USA: UNITED STATES

* Zip / Postal Code:

38505-0001

e. Organizational Unit:

Department Name:

Office of Research

Division Name:

f. Name and contact information of person to be contacted on matters involving this application:

Prefix:

Mr.

* First Name:

Michael

Middle Name:

* Last Name:

Aikens

Suffix:

Title:

Director, TN Tech Center for Rural Innovation

Organizational Affiliation:

Tennessee Technological University

* Telephone Number:

931-372-3810

Fax Number:

* Email:

maikens@tntech.edu

Application for Federal Assistance SF-424

* 9. Type of Applicant 1: Select Applicant Type:

H: Public/State Controlled Institution of Higher Education

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

* Other (specify):

* 10. Name of Federal Agency:

Department of Commerce

11. Catalog of Federal Domestic Assistance Number:

11.020

CFDA Title:

Cluster Grants

* 12. Funding Opportunity Number:

EDA-HDQ-OIE-2020-2006455

* Title:

2020 Build to Scale Program - Full Application

13. Competition Identification Number:

2877445

Title:

Venture Challenge

14. Areas Affected by Project (Cities, Counties, States, etc.):

1234-AreasAffectedProject.pdf

Add Attachment

Delete Attachment

View Attachment

* 15. Descriptive Title of Applicant's Project:

TN Tech Rural Venture Initiative (RVI)

Attach supporting documents as specified in agency instructions.

Add Attachments

Delete Attachments

View Attachments

Application for Federal Assistance SF-424**16. Congressional Districts Of:*** a. Applicant * b. Program/Project

Attach an additional list of Program/Project Congressional Districts if needed.

17. Proposed Project:* a. Start Date: * b. End Date: **18. Estimated Funding (\$):**

* a. Federal	<input type="text" value="623,061.00"/>
* b. Applicant	<input type="text" value="398,061.00"/>
* c. State	<input type="text" value="0.00"/>
* d. Local	<input type="text" value="0.00"/>
* e. Other	<input type="text" value="225,000.00"/>
* f. Program Income	<input type="text" value="0.00"/>
* g. TOTAL	<input type="text" value="1,246,122.00"/>

*** 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**

- ☐ a. This application was made available to the State under the Executive Order 12372 Process for review on .
- ☒ b. Program is subject to E.O. 12372 but has not been selected by the State for review.
- ☐ c. Program is not covered by E.O. 12372.

*** 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes," provide explanation in attachment.)**☐ Yes ☒ No

If "Yes", provide explanation and attach

21. *By signing this application, I certify (1) to the statements contained in the list of certifications and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)**

☒ ** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix: * First Name:

Middle Name:

* Last Name:

Suffix:

* Title: * Telephone Number: Fax Number: * Email: * Signature of Authorized Representative: * Date Signed:

BUDGET INFORMATION - Non-Construction Programs

OMB Number: 4040-0006
Expiration Date: 02/28/2022

SECTION A - BUDGET SUMMARY

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. 2020 Build to Scale Program	11.020	\$	\$	\$ 623,061.00	\$ 623,061.00	\$ 1,246,122.00
2.						
3.						
4.						
5. Totals		\$	\$	\$ 623,061.00	\$ 623,061.00	\$ 1,246,122.00

Standard Form 424A (Rev. 7- 97)
Prescribed by OMB (Circular A -102) Page 1

SECTION B - BUDGET CATEGORIES

6. Object Class Categories	GRANT PROGRAM, FUNCTION OR ACTIVITY				Total (5)
	(1)	(2)	(3)	(4)	
	2020 Build to Scale Program				
a. Personnel	\$ 156,036.00	\$	\$	\$	\$ 156,036.00
b. Fringe Benefits	55,636.00				55,636.00
c. Travel	9,454.00				9,454.00
d. Equipment					
e. Supplies	16,690.00				16,690.00
f. Contractual	300,000.00				300,000.00
g. Construction					
h. Other	2,235.00				2,235.00
i. Total Direct Charges (sum of 6a-6h)	540,051.00				\$ 540,051.00
j. Indirect Charges	83,010.00				\$ 83,010.00
k. TOTALS (sum of 6i and 6j)	\$ 623,061.00	\$	\$	\$	\$ 623,061.00
7. Program Income	\$	\$	\$	\$	\$

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SECTION C - NON-FEDERAL RESOURCES

(a) Grant Program		(b) Applicant	(c) State	(d) Other Sources	(e)TOTALS
8.	2020 Build to Scale Program	\$ 398,061.00	\$	\$ 225,000.00	\$ 623,061.00
9.					
10.					
11.					
12. TOTAL (sum of lines 8-11)		\$ 398,061.00	\$	\$ 225,000.00	\$ 623,061.00

SECTION D - FORECASTED CASH NEEDS

	Total for 1st Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
13. Federal	\$	\$	\$	\$	\$
14. Non-Federal	\$				
15. TOTAL (sum of lines 13 and 14)	\$	\$	\$	\$	\$

SECTION E - BUDGET ESTIMATES OF FEDERAL FUNDS NEEDED FOR BALANCE OF THE PROJECT

(a) Grant Program		FUTURE FUNDING PERIODS (YEARS)			
		(b)First	(c) Second	(d) Third	(e) Fourth
16.	2020 Build to Scale Program	\$	\$	\$	\$
17.					
18.					
19.					
20. TOTAL (sum of lines 16 - 19)		\$	\$	\$	\$

SECTION F - OTHER BUDGET INFORMATION

21. Direct Charges:		22. Indirect Charges:	20% on MTDC (\$415,051 base)
23. Remarks:			

BUDGET INFORMATION - Non-Construction Programs

OMB Number: 4040-0006
Expiration Date: 02/28/2022

SECTION A - BUDGET SUMMARY

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. 2020 Build to Scale Program	11.020	\$	\$	\$ 623,061.00	\$ 623,061.00	\$ 1,246,122.00
2.						
3.						
4.						
5. Totals		\$	\$	\$ 623,061.00	\$ 623,061.00	\$ 1,246,122.00

Standard Form 424A (Rev. 7- 97)
Prescribed by OMB (Circular A -102) Page 1

SECTION B - BUDGET CATEGORIES

6. Object Class Categories	GRANT PROGRAM, FUNCTION OR ACTIVITY				Total (5)
	(1)	(2)	(3)	(4)	
	2020 Build to Scale Program				
a. Personnel	\$ 156,036.00	\$	\$	\$	\$ 156,036.00
b. Fringe Benefits	55,636.00				55,636.00
c. Travel	9,454.00				9,454.00
d. Equipment					
e. Supplies	16,690.00				16,690.00
f. Contractual	300,000.00				300,000.00
g. Construction					
h. Other	2,235.00				2,235.00
i. Total Direct Charges (sum of 6a-6h)	540,051.00				\$ 540,051.00
j. Indirect Charges	83,010.00				\$ 83,010.00
k. TOTALS (sum of 6i and 6j)	\$ 623,061.00	\$	\$	\$	\$ 623,061.00
7. Program Income	\$	\$	\$	\$	\$

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SECTION C - NON-FEDERAL RESOURCES					
(a) Grant Program		(b) Applicant	(c) State	(d) Other Sources	(e)TOTALS
8.	2020 Build to Scale Program	\$ 398,061.00	\$	\$ 225,000.00	\$ 623,061.00
9.					
10.					
11.					
12. TOTAL (sum of lines 8-11)		\$ 398,061.00	\$	\$ 225,000.00	\$ 623,061.00

SECTION D - FORECASTED CASH NEEDS					
	Total for 1st Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
13. Federal	\$	\$	\$	\$	\$
14. Non-Federal	\$				
15. TOTAL (sum of lines 13 and 14)	\$	\$	\$	\$	\$

SECTION E - BUDGET ESTIMATES OF FEDERAL FUNDS NEEDED FOR BALANCE OF THE PROJECT					
(a) Grant Program		FUTURE FUNDING PERIODS (YEARS)			
		(b)First	(c) Second	(d) Third	(e) Fourth
16.	2020 Build to Scale Program	\$	\$	\$	\$
17.					
18.					
19.					
20. TOTAL (sum of lines 16 - 19)		\$	\$	\$	\$

SECTION F - OTHER BUDGET INFORMATION	
21. Direct Charges:	22. Indirect Charges: 20% on MTDC (\$415,051 base)
23. Remarks:	

ASSURANCES - NON-CONSTRUCTION PROGRAMS

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0040), Washington, DC 20503.

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET. SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.

NOTE: Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the awarding agency. Further, certain Federal awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, I certify that the applicant:

1. Has the legal authority to apply for Federal assistance and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project cost) to ensure proper planning, management and completion of the project described in this application.
2. Will give the awarding agency, the Comptroller General of the United States and, if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the award; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
3. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
4. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
5. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
6. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee- 3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.
7. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
8. Will comply, as applicable, with provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.

9. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. §874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333), regarding labor standards for federally-assisted construction subagreements.
10. Will comply, if applicable, with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
11. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clean Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).
12. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
13. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a-1 et seq.).
14. Will comply with P.L. 93-348 regarding the protection of human subjects involved in research, development, and related activities supported by this award of assistance.
15. Will comply with the Laboratory Animal Welfare Act of 1966 (P.L. 89-544, as amended, 7 U.S.C. §§2131 et seq.) pertaining to the care, handling, and treatment of warm blooded animals held for research, teaching, or other activities supported by this award of assistance.
16. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.
17. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."
18. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.
19. Will comply with the requirements of Section 106(g) of the Trafficking Victims Protection Act (TVPA) of 2000, as amended (22 U.S.C. 7104) which prohibits grant award recipients or a sub-recipient from (1) Engaging in severe forms of trafficking in persons during the period of time that the award is in effect (2) Procuring a commercial sex act during the period of time that the award is in effect or (3) Using forced labor in the performance of the award or subawards under the award.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL	TITLE
Francis Otuonye	Interim Vice President for Research
APPLICANT ORGANIZATION	DATE SUBMITTED
Tennessee Technological University	06/12/2020

Standard Form 424B (Rev. 7-97) Back

DISCLOSURE OF LOBBYING ACTIVITIES

Complete this form to disclose lobbying activities pursuant to 31 U.S.C.1352

OMB Number: 4040-0013

Expiration Date: 02/28/2022

1. * Type of Federal Action: <input type="checkbox"/> a. contract <input checked="" type="checkbox"/> b. grant <input type="checkbox"/> c. cooperative agreement <input type="checkbox"/> d. loan <input type="checkbox"/> e. loan guarantee <input type="checkbox"/> f. loan insurance	2. * Status of Federal Action: <input checked="" type="checkbox"/> a. bid/offer/application <input type="checkbox"/> b. initial award <input type="checkbox"/> c. post-award	3. * Report Type: <input checked="" type="checkbox"/> a. initial filing <input type="checkbox"/> b. material change
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4. Name and Address of Reporting Entity:
☒ Prime ☐ SubAwardee

*** Name**

Street 1

*** City**

State

Street 2

Zip

Congressional District, if known:

5. If Reporting Entity in No.4 is Subawardee, Enter Name and Address of Prime:

6. * Federal Department/Agency: <input style="width: 95%;" type="text" value="U.S. Economic Development Administration"/>	7. * Federal Program Name/Description: <input style="width: 95%;" type="text" value="Cluster Grants"/>
8. Federal Action Number, if known: <input style="width: 95%;" type="text"/>	9. Award Amount, if known: \$ <input style="width: 95%;" type="text"/>

10. a. Name and Address of Lobbying Registrant:

Prefix

*** First Name**

*** Last Name**

Middle Name

Street 1

Street 2

*** City**

State

Zip

b. Individual Performing Services (including address if different from No. 10a)

Prefix

*** First Name**

*** Last Name**

Middle Name

Street 1

Street 2

*** City**

State

Zip

11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when the transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

*** Signature:**

*** Name:**

Prefix

*** First Name**

*** Last Name**

Suffix

Middle Name

Title:

Telephone No.:

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 Standard Form - LLL (Rev. 7-97)

Embedded Non-PDF File

Filename: GrantApplication.xml

Description: Application attachment from Grants.gov

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Project Narrative: TN Tech Rural Venture Initiative

Executive Summary

The TN Tech Rural Venture Initiative (RVI) project will identify, build, and scale new tech-enabled and scalable ventures. The project will target and catalyze startups in the biomedical, healthcare, transportation, advanced manufacturing, and SBIR/STTR sectors. The RVI will implement a comprehensive approach to technical assistance, student internships, commercialization and entrepreneurship support, an acceleration program, a consultation program, mentorship, applied research, and outreach and engagement initiatives to advance startups and entrepreneurs in the rural Upper Cumberland region of Tennessee. These activities will promote service area economic growth and resiliency, employment opportunities, capacity for innovation, access to capital, knowledge creation, and regional economic well-being. The RVI will address our region's needs through scaling existing rural economic development initiatives and leveraging strategic university and community intellectual/physical resources. This project expects to advance 15 entrepreneurs/startups (including 3 SBIR/STTR award applications), create or retain 50 jobs, create 20 student internships, review 165 business concepts, and conduct 180 outreach events.

Description of Location and Region

Primary Service Area

The primary service area is the Upper Cumberland region of middle Tennessee, which is entirely rural and consists of 14 counties and 15 opportunity zones that have been on the losing end of globalization and economic transition since the 2008 economic downturn. The Appalachian Regional Commission (2020) defines three of these counties as distressed, three as at-risk, and eight as transitional; none are considered competitive or attainment level.

County	FIPS Code	Economic Status
Clay	47027	Distressed
Fentress	47049	Distressed
Jackson	47087	Distressed
Overton	47133	At-Risk
Van Buren	47175	At-Risk
Warren	57177	At-Risk
Smith	47159	Transitional
White	47185	Transitional
Cannon	47015	Transitional
Cumberland	47035	Transitional
Dekalb	47041	Transitional
Macon	47111	Transitional
Pickett	47137	Transitional
Putnam	47141	Transitional

Sources: The United States Census Bureau (2019) and the Appalachian Regional Commission (2020)

Communities Served

The Upper Cumberland is home to approximately 410,000, which is a 3.5% increase over five years. The growth of the area is expected to continue and be reflected in the 2020 census, with the City of Cookeville becoming the region's first urban center. The remainder of the region is primarily made up of smaller rural towns. Within the service area, there are 12,766 businesses employing 136,758 residents. The median household incomes in the region range between \$33,933 and \$47,457. The unemployment rate in November 2019 was 3.9%, and the average age was 42.3, both of which may cause challenges for employers in the coming years. The service region's primary areas of need are in the following sectors: Advocacy, Industrial Development, Manufacturing, Accommodation & Food Services, Transportation Infrastructure, and Retail Trade/Development. Service area project resources within the communities served include Tennessee Tech University (TN Tech), several Community Colleges, TN Colleges of Applied Technology, the Small Business Development Center, The Biz Foundry entrepreneurship center, the Upper Cumberland Development District, and the Upper Cumberland Human Resources Association. All community resources are working to create a pipeline of skilled workers, but demand for a skilled workforce is still outnumbering the incoming labor force for certain sectors. With our service region's resources, financial institution relationships, and investor networks, we have the capacity to

facilitate over \$100,000,000 in private investments and loans to better serve these sectors, create jobs and scale employment, and reduce rural challenges. Sources: UCDD (2020) and EMSI (2020.1).

Regional Needs and Opportunities

Needs. Stats America *Innovation 2.0* (2020) indicates the Upper Cumberland region has the following economic needs and problems: low relative capacity for innovation, low human capital and knowledge creation level, very low employment and productivity level, and low economic well-being level. Furthermore, these counties face unique rural challenges in workforce development and attraction, access to healthcare, access to mental health resources, low educational attainment, access to technology, lack of diversity, drug addiction, etc.

Opportunities. The project service area presents a variety of opportunities to address the above needs and problems. Opportunities to satiate these regional needs and problems include, but are not limited to, 14 broadband/gig-ready counties, our region's low cost of living, attractive small business tax incentives, scaling of existing rural economic development resources, NSF I-Corps commercialization program, LaunchTN SBIR/STTR training, and the TN Tech Eagle Works Innovation & Entrepreneurship initiative. Our ecosystem has the capacity, investor networks, and financial institution relationships to facilitate over \$100,000,000 in private investments and loans. We also have a strong candidate workforce pool of TN Tech graduates and other service area educational institutions to create jobs and scale employment opportunities. Outcomes of this project will help facilitate the overall economic well-being of the service area.

Stakeholders. The project will serve the following stakeholders: TN Tech student inventors, faculty researchers and inventors, SBIR/STTR entrepreneurs/startups, and community-based entrepreneurs. All the above stakeholders need technical assistance, consultation and mentorship, an accelerator program, and technology commercialization assistance. Each stakeholder will have access to all of the above resources throughout the project. Other project stakeholders include government officials (local, state, and federal), who need information about commercialization and small business data to assist with creation of public policies to solve rural economic issues.

Varied Entities Relevant to the Region that Will Be Served by the Proposed Project

The following entities will be served by the project. TN Tech will receive grant funding to run the project. The Biz Foundry will receive project contractual funding to initiate and operate the project's accelerator program. BGBO Co. will receive project contractual funding to initiate and operate the project's consultation program. The Upper Cumberland Small Business Development Center (SBDC) will not receive any grant funding, but all RVI project clients will concurrently become SBDC clients.

Impacts Beyond the Noted Region

The Upper Cumberland is the primary targeted service area, but there is a potential for the distressed and at-risk counties contiguous to the primary service area that could benefit from the project. Although the project is not targeting these contiguous counties, project resources can potentially be made available given that the prospective concepts from these counties meet all guidelines for the project, and there is a compelling reason to include them.

Description of Proposed Project

Project Purpose

The TN Tech RVI will identify, build, and scale new scalable ventures. We will catalyze tech-enabled, biomedical, transportation, advanced manufacturing, and SBIR/STTR entrepreneurs/startups through scaling existing rural economic development programs, technical assistance, commercialization, an acceleration program, a consultation program; mentorship; applied research; and leveraging strategic university and community resources. The project will foster the region's economic growth and facilitate improvement of overall economic well-being with outcomes that will both improve the region's resiliency and seek to improve the service area's capacity for innovation, human capital, knowledge creation, employment opportunities, and economic well-being. These outcomes will simultaneously reduce the service region's rural-facing challenges, such as low human capital and knowledge creation level, very low employment and productivity level, and low economic well-being level. The outcomes of the project directly align and further the mission and spirit of TN Tech's Rural Reimagined Grand Challenge that harnesses science, technology, innovation, and economic development to transform rural living in the service area. The project will address, directly align with, and seek to reduce the impacts of challenges facing the rural communities in our service area.

Discussion of Proposed Solution

The proposed solution is represented by a progressive, three-step process detailed below. We will first identify, assess, and select venture concepts and adopt those that fit project criteria for clients. Second, during the build phase, we

will accelerate these concepts toward commercialization. As the third step, we will scale these ventures by providing access to leadership and operations consultation/coaching in scale programming that is specifically designed for each project client. Due to concerns related to the coronavirus pandemic, the entire project has been intentionally designed for deployment in a virtual/remote format. The RVI will actively seek to recruit and incorporate clients and interns from diverse and underserved populations.

1. Identify. The project will identify, engage, assess, and select new venture concepts that meet EDA criteria for the Venture Challenge. A marketing campaign, lead generation mechanism, and assessment instrument will select prospective venture concepts that possess strong ability and motivation to commercialize and scale. Each selected venture will receive two subsequent phases of project programming designed to build and move the venture toward successful commercialization and scale.

2. Build. Each selected venture ("clients") will enter the program and receive "Build" phase programming from TN Tech and its partners that is designed to accelerate the venture toward commercialization and scale. TN Tech will provide project clients with program navigation, technical assistance, commercialization assistance, government connections, student internships, faculty advisement, research opportunities, and connections to educational outcomes. Additional programming provided by our partners will include consultation/coaching services, project management assistance, resources through an accelerator program, mentorship, access to corporate connections, financial advisement, access to capital, and legal counsel.

3. Scale. After Build phase programming is successfully implemented, and the venture is prepared to scale, "Scale" phase programming custom designed for each client will commence. Scale phase programming is provided by TN Tech and its project partners. This phase will focus on providing access to leadership and operations consultation/coaching throughout scale; market development and expansion; talent acquisition and expanding job creation; human resources mentorship; communications, marketing, and PR assistance; technical assistance; business information, data science and analytics; access to capital, investments, and loans; research opportunities; and economic impact measurement.

Concurrently to the above three phases, we will conduct applied research for assessment, development, and successful implementation through leveraging the skill sets of the following two TN Tech programs: Program Planning & Evaluation (PPE) and Mechanical Engineering (MSME). Both research projects will utilize graduate students and faculty researchers/advisors who will collaborate on research design and implementation. TN Tech will provide match funding, faculty cost effort share, and resources to support both graduate assistants and faculty advisors.

Program Planning & Evaluation (PPE) Resiliency Model. This research seeks to develop and implement an accessible, sustainable, and responsive PPE model. The model will serve the defined region of need, but it will be intentionally designed to support replication in rural regions across the nation, thus widening its benefit. TN Tech will fund the research and graduate assistantship of a PPE Ph.D. student advised by faculty researchers who will collaborate in research design. Research design components include community asset-based needs assessments within the service area; examination of cultures and contexts, an interactive model approach (Cafarella & Daffron, 2013); data collection and analysis; a success output measurement instrument; formal creation and implementation of the PPE model; and the dissemination of all research for observed replication in other rural regions. Successful research outcomes beyond the establishment, implementation, and evaluation of the model include creating and transferring knowledge to mindfully inform and sustainably shape program development through iterative, formative, and summative assessments/evaluations to continually improve the project and PPE model. Outcomes will be disseminated through conference proceedings, publications, discussions with local and regional officials and communities, and dissertation research focused on or containing components of the specific project research. TN Tech will support the ongoing assistantship life cycle and the dissemination of research beyond the conclusion of the grant funding.

Engineering: Manufacturing Technology. The research will focus on the adoption of commercialization technology into rurally focused economic development. TN Tech will fund a graduate student with a dual track program in Master of Science in Mechanical Engineering (MSME) and Business MBA. The adoption of the new technology in rural manufacturing will allow the project clients to better adapt to changing market needs without additional capital investment. For example, in the case of an economic disruption like COVID-19, the technology can be quickly repurposed to produce supplies needed by the local community. The graduate student will develop the technical training needed for project clients and local small businesses to adopt the technology and assist in the development of the business plan for the venture. The tool's development can be used as a template for other rural areas to pursue similar programs.

Alignment with Community Needs

The project will implement strategies, resources, technical assistance, research, and expertise to improve the economic outlook of and mitigate challenges in this region through identifying, building, and scaling new ventures that are tech-enabled and scalable by nature. The project's approach is designed to catalyze the strategic revitalization efforts of the service area and to leverage and scale existing rural economic development initiatives. A regional ecosystem of economic developers, academics, researchers, mentors, consultants, faculty, students, and community programs will collaborate to achieve project success. The project's inputs, outputs, and outcomes seek to measurably increase this region's capacity for innovation, commercialization, human capital and knowledge creation, employment and productivity levels, and advancement of its economic well-being level. Linkages to additional university programs and community resources will further assist the project stakeholders with finding solutions to reduce impacts from rural challenges.

Key Personnel

Mr. Michael Aikens, Principal Investigator/Director (PI). Mr. Aikens is the current PI/Director of the EDA UC program TN Tech Center for Rural Innovation. Mr. Aikens will serve as the PI of the RVI project and will be responsible for project direction, implementation, reporting, and success. TN Tech will afford the PI's involvement through a percentage of his university effort share in consideration that no award funds will be utilized for his project involvement. Additionally, Mr. Aikens will connect and leverage related TN Tech initiatives into the project, including TCRI, Rural Reimagined Grand Challenge, Eagle Works, and the TN Tech Tomorrow Strategic Plan. Mr. Aikens will identify opportunities for new project partnerships and university collaborators.

Project Coordinator. We will utilize award funding to create a new full-time, benefitted Coordinator job position. The Coordinator responsibilities will include, but are not limited to, assisting with all aspects of the project such as deploying marketing, outreach, and engagement strategies; coordinating technical assistance meetings; overseeing student interns and connecting them with employers; project tracking and reporting through data and client management system; and facilitating the project's expansion, iteration, and improvement.

Dr. Byron Pardue, Project Co-PI. Dr. Pardue, a lecturer in the Mechanical Engineering Department where he teaches senior level design courses, has held various engineering management roles in the past 24 years, has served as a business mentor to the NSF I-Corps program, and holds 13 US patents. Dr. Pardue will facilitate the MSME/MBA research design, master's graduate assistant advisement, connections to industry, and project integration with capstone courses.

Dr. George Chitiyo, Project Co-PI. Dr. Chitiyo is a professor of Educational Research and Evaluation in the College of Education at TN Tech. Dr. Chitiyo teaches courses in research methods, statistics, and program evaluation; evaluates several National Science Foundation-funded projects, including Advanced Technological Education; and provides research mentorship to graduate students. Dr. Chitiyo will facilitate graduate doctoral student advisement and collaborate on PPE research design.

Dr. Ashley B. Akenson, Project Co-PI. Dr. Akenson is the Director of Graduate Programs for the College of Education at TN Tech and the Interim Associate Director for Institutional Assessment, Research, & Effectiveness. Dr. Akenson works in program planning and evaluation (PPE) and administration in healthcare, higher education, government, finance, and small business; has served as a grant writer; and is a PPE consultant and/or evaluator for numerous projects, including small business projects, academic initiatives, and federal grants. Dr. Akenson will facilitate graduate doctoral student advisement and collaborate on PPE research design.

TN Tech Graduate Students. A PPE Ph.D. doctoral student, advised by Drs. Chitiyo and Akenson, will collaborate in PPE research design components for the project. An MSME/MBA graduate student, advised by Dr. Pardue, will collaborate in MSME/MBA research design components for the project's commercialization of technology into rurally focused economic development. TN Tech will support the graduate students and faculty Co-PI's as a portion of project match.

Mr. Jeff Brown, Executive Director/President of The Biz Foundry. Mr. Brown will bring 25 years of entrepreneurial experience to the project. Jeff has started and managed five different businesses including a large real estate operation, a development company, a construction company, a mortgage operation, and full-service insurance business. Mr. Brown will operationalize the accelerator program and provide project clients with critical connections to mentor and investor networks. Mr. Brown will also oversee injection of Biz Foundry in-kind match sources into the project.

Mr. Micah Johnson, CEO of BGBO Co. Mr. Johnson will bring to the project over 18 years of experience in bootstrapping, fundraising, and advising organizations that range from 1 to 100 employees, earn \$10M+ in revenue, and are valued at up to \$17 billion. Mr. Johnson will provide project clients with monthly and ad-hoc, in-person (or remote)

consultation/coaching services and project management assistance that is custom designed for each client to catalyze the client's ventures throughout build and scale phase programming.

Mr. David Allen, President of TN Rural Development Fund CDFI. Mr. Allen is the founding partner of the Tennessee Rural Development Fund (TNRDF) and has advised domestic clients on a broad range of transactions across various sectors, including medical, banking, construction, retail, transportation, recreation, and agriculture. Prior to his experience in finance and investments, Mr. Allen owned a construction company with locations in Tennessee and Florida. Mr. Allen will provide in-kind financial assessment and advisement services as a source of cash match. Mr. Allen will also oversee injection of TN Rural Development Fund in-kind match sources into the project.

Essential Partners

The TN Tech Center for Rural Innovation (TCRI), an EDA University Center program, creates companies and expands economic development by providing technical assistance to main-street businesses and entrepreneurs within the tourism, technology, innovation, retail, and agriculture sectors. The TCRI project will provide the RVI with connections to strategic partners and collaborators, provide a community immersion mechanism, and provide a proven internship program model for the project. The TCRI will act as a lead-generation mechanism for the project. We project 5+ TCRI concept leads per year for a total of 15 reviewed concepts.

The TN Tech Eagle Works Innovation and Entrepreneurship Initiative (Eagle Works) instills entrepreneurial mindsets among students through co-curricular and experiential learning activities that spark innovation through annual student competitions and challenges with over \$30,000 in awards, fosters entrepreneurship and commercialization, and promotes development of intellectual property. Eagle Works will conduct 12 outreach and engagement events. Eagle Works will act as a lead generation mechanism for the project. Currently, 3 Eagle Works concept leads are ready for review upon award announcement, and we project an additional 5+ Eagle Works concept leads per year for a total of 18 reviewed concepts.

The TN Tech NSF I-Corps (I-Corps) will prepare prospective project clients, while concurrently recommending promising new technical concepts through their commercialization program. I-Corps can supplement project clients with Lean Startup methodology, auxiliary funding to facilitate customer discovery and problem identification, mentorship from seasoned business and technical professionals, and facilitate meetings with SBIR/STTR grant program managers. I-Corps will act as a lead-generation mechanism for the project. Currently, 10 I-Corps concept leads are ready for review upon award announcement. We project an additional 10+ I-Corps concept leads per year for a total of 39 reviewed concepts. I-Corps will also facilitate at least one SBIR/STTR program manager meeting per year.

The TN Tech Intellectual Property Advisory Committee (IPAC) advises university policies on patents, copyrights, and guidelines for implementation. IPAC will advise and assist the project in all matters involving patents, trademarks, copyrights, and disclosures of copyrightable materials. IPAC will conduct six outreach and engagement events. IPAC will act as a lead-generation mechanism for the project. Currently, 27 IPAC concept leads are ready for review upon award announcement. We project an additional 10+ IPAC concept leads per year for a total of 57 reviewed concepts.

The Biz Foundry is a local entrepreneurship center (with three locations within the service region) that provides entrepreneurial and accelerator support to service area entrepreneurs, startups, and small businesses. The project will provide the Biz Foundry with funding to implement an accelerator program designed to catalyze venture development, growth, and scaling. The Biz Foundry will also provide in-kind match activities in the form of access to co-working space at each of its three locations, marketing support, event-space access, in-person and virtual mentorship, travel to client locations, project marketing, and facilitate meetings with potential investors. The Biz Foundry will conduct nine outreach and engagement events. The Biz Foundry will act as a lead-generation mechanism for the project. We project 5+ Biz Foundry concept leads per year for a total of 15 reviewed concepts.

BGBO. Co. is a scale consultation service within the project service area that helps companies innovate, improve, build, and scale through innovative strategies, streamlining operations, and providing key teams for implementation. BGBO. Co. has over 18 years of experience in bootstrapping, fundraising, merging, advising, founding, and exiting entrepreneurs/startups. The project will afford funding to BGBO Co. to provide clients with consultation services that include monthly and ad-hoc, in-person (or remote) meetings with the intent to scale project clients toward commercialization. Consultation will be provided in the following forms: product strategies to transform ideas; leadership strategies; sales strategies; and marketing strategies to customer leads through modern, automated, and efficient protocols.

TN Rural Development Fund CDFI (TNRDF) provides affordable capital to spur business growth and expansion in rural and economically distressed counties within the RVI project service area, stimulates business and

economic growth through the provision of affordable capital, and creates financial infrastructures by leveraging private investment into low-income communities to improve the overall quality of life in the project service area. The TNRDF will provide in-kind services including startup financial consultation, business financial analysis and advisement, risk assessment, SWOT analysis, legal consultation, commercialization consultation, and debt analysis. TNRDF will act as a lead-generation mechanism for the project. We project 5+ TNRDF concept leads per year for a total of 15 reviewed concepts.

The Upper Cumberland Small Business Development Center (SBDC) provides small business startup services within the RVI project service area including, but not limited to, business plan development, financial planning assistance, marketing plan development, sources of capital, e-commerce development, and social media guidance. The Tennessee Small Business Development Center (TSBDC) will provide no-cost services that will help clients compete in the global marketplace, and its network of certified professional business counselors will provide business coaching, training, and auxiliary funding for client legal counsel. We project 5+ SBDC concept leads per year for a total of 15 reviewed concepts. The SBDC will not receive any grant funding, but all RVI project clients will concurrently become SBDC clients.

The Upper Cumberland Development District (UCDD) promotes economic growth within the service area by offering economic and community development services to assist residents, businesses, and local government. UCDD will provide project community immersion mechanisms, identification of prospective business real estate, connections to local and state officials, and programmatic resources that seek to improve quality of life and rural economic success. UCDD will conduct 12 outreach and engagement events.

Potential Future Partners

The following TN Tech grant proposals were recently developed and submitted. If awarded, we will connect and leverage these grants as essential partners.

TN Tech TCRI CARES. TN Tech has submitted a proposal titled “TCRI CARES” in response to the EDA CARES Act Recovery Assistance Invitation to University Centers. If selected as an award recipient for the TCRI CARES project, we will leverage and connect TCRI CARES to the Rural Venture Initiative (RVI). TCRI CARES will function as a lead-generation mechanism to the RVI by reviewing scalable and tech-enabled concepts and recommending concepts that align with EDA B2S project guidelines. TCRI CARES will also provide technical assistance to prepare these entrepreneurs as they enter the RVI project.

TN Tech Venture Well BioFoundry. The proposed BioFoundry will leverage potentially commercializable biomimicry concepts to advance environmental and social sustainability innovation in prototypes developed in foundry-designed undergraduate chemical engineering courses. Prototypes developed through the BioFoundry that demonstrate strong ability for commercialization will be assessed for RVI project inclusion.

Project Team Structure

Key personnel and essential partners will collaborate across diverse project teams that have specific roles and expected outcomes. The project will leverage our service area’s existing intellectual and physical resources to scale existing EDA, TN Tech, and community programming and resources. Please see Staffing Plan document for more detail surrounding the core, support, research & academia, and venture teams.

Outreach and Engagement Plan

We plan to identify project concept ventures through at least 180 outreach/engagement events (“events”), marketing activities, and engagement with government stakeholders and prospective clients at conferences. Events and marketing will target prospective client audiences through a variety of strategic outlets. Outreach events will consist of in-person events. Due to COVID-19 concerns, a plan is currently in-place to deploy events virtually/remotely through Teams or Zoom platforms. The TCRI is already conducting its outreach and engagement events virtually with a high degree of success. The same model will be applied to RVI events if necessary. Events will occur at or be hosted by two primary location types. TN Tech will host on-campus (or virtual) events targeting the TN Tech student inventors, faculty researchers and inventors, SBIR/STTR entrepreneurs/startups stakeholder groups. Community events will occur (in-person or virtually) at a variety of locations in the service area’s communities and target SBIR/STTR entrepreneurs/startups, community-based entrepreneurs, and government stakeholder groups. Marketing will consist of messaging, print and digital marketing assets, social media, and frequent storytelling about client updates and successes. Our outreach, engagement, and marketing will intentionally seek to spread the message of the RVI to recruit prospective clients and interns from diverse and underserved populations.

Outreach and engagement events and marketing will begin immediately upon award announcement and will continue throughout project lifecycle. The table below provides a summary of each event including location, short description, timeline per year, and total activities across three years. Tracking of each event will be facilitated through the client and data management system CiviCRM. Additional information about outreach, engagement, and marketing tracking mechanisms can be found in the Anticipated Impacts section.

Location	Description	Timeline Per Year	Total
TN Tech	Eagle Works RVI Workshops	2 per semester (Fall & Spring)	12
TN Tech	I-Corps RVI Workshops	4 workshops per year	12
TN Tech	Faculty RVI Information Events	1 per semester (Fall, Spring, Summer)	9
TN Tech	IPAC RVI Information Events	2 events per year	6
TN Tech	RVI Marketing Media/Messaging	4 marketing posts per semester (Fall, Spring, Summer) and weekly social media engagement posts (social media posts are not factored into total, we expect at least 1 weekly social media post, plus partners will share posts on their respective social media channels = over 200 social media posts total)	24
TN Tech	RVI client update and success stories	3 stories per client per year (5 clients per year)	45
TN Tech/Community	RVI themed events targeted to diverse/underserved populations	2 events per semester (Fall, Spring, Summer)	18
Community	Biz Foundry RVI Information Events	3 per year (Fall, Spring, Summer)	9
Community	UCDD Information Events	4 per year (Fall, Spring, Summer)	12
Community	LaunchTN University Roundtables	2 per year (Fall, & Spring)	6
Community	LaunchTN SBR/STTR Events	1 per year (minimum [will provide more based on demand])	3
Community	UCCEA Information Events	4 per year (quarterly UCCEA board meetings)	12
Community	Highlands Young Professionals Social Gatherings (themed RVI nights)	4 per year (quarterly)	12
Community	Conferences	We will engage potential clients and spread RVI awareness at conferences that the TCRI attends. These potentially include TN Governors Conference, UEDA annual conference, etc. Conferences are not included in total due to uncertainty surrounding COVID-19.	n/a
Total Project Outreach and Engagement Events			180

Scope of Work

Project Activities

Marketing, Outreach, Engagement, and Storytelling. Deliverables: We will conduct campus and community outreach meetings to create awareness among stakeholders and identify potential clients, develop and disseminate printed and digital advertisements on campus and in the community, and frequently disseminate written project client update and success stories. Lead generation, feeder mechanisms, and assessment tools will facilitate identification of prospective

project clients. Milestones: Identify 55 business concepts per year. Conduct 60 outreach events per year. Write 15 client stories per year.

Concept Review and Assessment. Deliverables: We will meet with identified clients, conduct concept reviews and project fit assessments, and formally induct clients into the project. Milestones: Conduct 55 concept reviews and project fit assessments per year (39 concepts are currently ready for review upon award announcement). Adopt 5 project clients per year.

Technical Assistance. Deliverables: We will provide technical assistance to facilitate project client commercialization throughout build and scale programming phases. Milestones: 60+ technical assistance meetings per year (at least 1 monthly meeting per client per year [5 clients per year]).

Student Internships. Deliverables: Technical assistance will be supplemented by placing student interns, who range from a wide interdisciplinary talent pool across nine colleges, into client ventures. Interns will provide diverse skill sets to address specific client needs. Milestones: Identify and place ~6 interns into client businesses per year.

Consultation and Mentorship. Deliverables: We will provide customized consultation and mentorship throughout each client’s build and scale programming phases. Milestones: 60+ consultation meetings per year (at least 1 monthly meeting per client per year [5 clients per year]). An additional 30+ ad-hoc consultation, mentorship, and coaching meetings based on client need.

Supporting and Accelerating Commercialization and Entrepreneurship. Deliverables: We will assist technology commercialization and entrepreneurs through technical assistance, startup support, coaching/mentorship, and induction to the accelerator program. This assistance will support clients throughout commercialization, scale, and product development. Milestones: Five clients participating in project per year. 15 total product launches.

Conducting, Sharing, and Disseminating Applied Research. Deliverables: We will support two applied research projects in which the researchers will collaborate and transfer knowledge to facilitate programmatic outcomes and client success. Milestones: Findings disseminated through conference proceedings, publications, discussions with local and regional officials and communities, and dissertation development.

Project Timeline

Year 1 - Estimated Project Start Date: August 1, 2020	
August 2020	Purchase computers, software, and supplies
	Create, advertise, and interview for Coordinator position
	Develop and deploy client and data management system “CiviCRM”
	Enter concept leads and other programmatic metric data into CiviCRM
	Assess existing leads (45 leads are currently ready for assessment)
	Meetings with the 4 existing, pre-assessed concept ventures
	Identify and meet with 2 graduate assistants and faculty advisors. Initiate research design
	Initiate consultation programming with BGBO
	Initiate accelerator program with The Biz Foundry
September 2020	Hire Coordinator
	Adopt 3-5 project clients based on outcomes of existing leads assessment
	Adopt the 4 existing, pre-assessed concepts as clients
	Clients enter consultation program
	Clients enter acceleration program
	Develop marketing assets and strategy
	Meetings with graduate assistants and faculty advisers. Research design is reviewed.
	Identify and employ technical assistance interns into client ventures
	Employ project support academic credit interns and scholarship students
October – December 2020	Deploy marketing campaign and assets. Write initial client update stories. Profile clients on TN Tech RVI website
	Conduct initial outreach events (see Outreach and Engagement section for more information about events)
	Research designs approved. Applied research commences for both graduate students.

	Assess newly generated concept leads
	Project is fully implemented with all components deployed.
January – July 2021	Continue marketing, outreach and engagement, concept reviews, client identification/assessment/adoption
	Initiate sustainability strategy activities
	Project metric reporting
Year 2	
August 2021 – July 2022	Continue marketing deployment
	Continue outreach and engagement (see Outreach and Engagement section for more information about events)
	Continue concept reviews and assessments
	Adopt five new clients into program. Commence build and scale programming phases
	Communicate initial research findings through publications and/or conference proceedings
	Continue sustainability strategy activities
	Project metric reporting
Year 3 - Project Estimated End Date: July 31, 2023	
August 2022 – July 31, 2023	Continue marketing deployment
	Continue outreach and engagement (see Outreach and Engagement section for more information about events)
	Continue concept reviews and assessments
	Adopt five new clients into program. Commence build and scale programming phases
	Communicate research findings through publications and/or conference proceedings. Students develop PhD dissertation and MSME/MBA thesis
	Project metric reporting
	EDA project comes to formal ending
	Project established as funded, sustainable TN Center of Excellence

Anticipated Impacts

Data and Client Management System

The open source, web-based application “CiviCRM” will serve as the Data and Client Management System. CiviCRM is a proven platform specifically designed for non-profit administration and grant management activities. CiviCRM will allow us to track all project metrics in a machine-readable format. Currently, the TCRI utilizes CiviCRM for all EDA tracking and reporting requirements and will implement a similar architecture that will track clients and client growth, events, activities, collaborators, partners, and other required reporting metrics. The project PI has over ten years of experience developing and deploying scalable CiviCRM architectures for government and enterprise-level tracking and reporting solutions. Due to the free, open source nature of CiviCRM, no award funds will need to be expensed for procurement of the program. Minimal charges to the grant will be utilized for CiviCRM web server hosting. CiviCRM will be operational in the first three weeks upon award announcement.

Program Activities	Metrics	Tracking Mechanisms
Outputs	165 business concepts reviewed	CiviCRM Contacts module
	15 entrepreneurs/startups/SBIR/STTR (clients) participating in program	Client tracking reports CiviCRM Contacts module CiviCRM KPI management module CiviCRM Contributions module
	180+ outreach and engagement events	CiviCRM Events Module CiviCRM Campaigns module CiviCRM Civic Engagement module
	20 student internships	TN Tech Human Resources CiviCRM Contacts module
Outcomes	Total amount of investment capital raised (\$5mm+ anticipated)	Biz Foundry tracking and client reports CiviCRM KPI management module CiviCRM Contributions module

Total amount of capital raised through loans and grants (\$5mm+ anticipated)	TNRDF and UCDD tracking and client reports CiviCRM KPI management module CiviCRM Contributions module
Total past fiscal year business sales	Client tracking reports CiviCRM KPI management module CiviCRM Contributions module
Total business sales	Client tracking reports CiviCRM KPI management module CiviCRM Contributions module
100 jobs created or retained	CiviCRM Contacts module Client tracking reports CiviCRM KPI management module
180+ technical assistance meetings	CiviCRM Contacts module CiviCRM Events Module CiviCRM Civic Engagement module
210+ consultation, coaching, and mentorship meetings	CiviCRM Events Module CiviCRM Civic Engagement module
15 meetings with potential investors or SBIR/STTR grant program managers.	CiviCRM Contacts module CiviCRM Events Module CiviCRM Civic Engagement module
15 new product launches	CiviCRM Contacts module CiviCRM KPI management module

Sustainability Plan

Anticipated Challenges and Potential Barriers

Rural facing risks in our service area include low human capital, knowledge creation and innovation capacity; employment and productivity; economic well-being; access to medical and mental healthcare; educational attainment; access to technology; lack of diversity; drug addiction; etc. Strategy for mitigating rural facing risks: Implement existing university and community strategies, programs, and resources to facilitate proactive solutions that mitigate these risks and raise the capacity for development, innovation, and entrepreneurship in the service area.

Market forces, economic volatility, and commercialization risks. Strategy to mitigate this risk: Frequent and customized project client consultation, mentorship, and coaching to hedge against these forces through a variety of highly qualified and experienced professionals and academics, research programs, and government agencies who specialize in scaling entrepreneurs, startups, and economic development initiatives.

Pandemics and disasters. Strategy to mitigate this risk: Promulgate existing TN Tech continuity and contingency planning resources and project collaboration with community response organizations to enhance emergency preparedness. At the time of writing, our community is suffering from a recent major tornado catastrophe in March which killed 19 and injured 92 individuals, destroyed over 140 buildings, damaged over 550 buildings, and displaced numerous families and workers. We are concurrently responding to the COVID-19 pandemic and are working with our partners to enhance our community pandemic and disaster responses, which will aid in continuity, contingency planning, and mitigation of economic injury due to future pandemics and disasters.

Post-Award Operations

Ensuring Sustainability. We will seek to establish the program as a sustainable, funded Tennessee Center of Excellence. Tennessee Centers of Excellence build upon the research strengths of campuses throughout Tennessee with a purpose to utilize higher education capabilities to serve Tennesseans through expanding the state's research base and subsequently increasing economic competitiveness. TN Tech has a demonstrated lineage and history of successfully starting and sustaining Centers of Excellence. Current TN Tech Centers of Excellence include the Center for Energy System Research; the Center for Manufacturing Research; the Center for the Management, Utilization, and Protection of Water Resources; the Cybersecurity Education, Research and Outreach Center; the Industrial Assessment Center; and the Science, Technology, Engineering & Mathematics Center.

Areas Affected by Project: Upper Cumberland region of Tennessee: 14 counties listed below

County	FIPS Code
Clay	47027
Fentress	47049
Jackson	47087
Overton	47133
Van Buren	47175
Warren	57177
Smith	47159
White	47185
Cannon	47015
Cumberland	47035
Dekalb	47041
Macon	47111
Pickett	47137
Putnam	47141

Additional Congressional Districts impacted by proposed project, TCRI CARES: EDA CARES
Act Recovery Assistance Invitation to University Centers: **TN-004**