

TECHNICAL PROPOSAL: RUS-20-01-DLT

Applicant Information:

- Organization:** Tao Learning Institute
- Project Title:** Distant Learning & Telemedicine in Appalachia
- Project Site:** <https://ignitecuriosity.org>
- Phone:** 929-229-2917
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- DUNS#:** 117004373

POC #1

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POC #2

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Proposed Sub-Recipients: None

Partnerships:

Grow with 

GLOBAL
ENTERPRISE



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B. EXECUTIVE SUMMARY

1. WHY THIS PROJECT IS NEEDED

As noted in the 2018-2019 Ohio Education Facts & Figures, **only 0.2% of schools are categorized as STEM Schools**. Thus, we have a strong need to set a new push for STEAM curriculum, especially in rural environments that usually are the last to adopt to educational changes. With this initiative and with the onset of digital tools, we will be able to give Appalachia Region students access to STEAM material at the same speed of any student in a metropolitan environment or as outlined by leaders such as Silicon Valley. The knowledge of Science and Technology will help students and practitioners to adapt to contemporary trends of financial sustenance by merging technology with conventional sources of income in rural areas.

There is also a lack of telemedicine programs, including sectors of telehealth as covered by our organization. There is a lot of misinformation shared online that reduces the literacy of health to impoverished areas that needs addressed.

2. ADDRESSING THE NEED

To achieve this objective, we will acquire a broadband facility to produce content, distribute media, and act as a hub-site of digital STEAM literacy programs and telemedicine. We will utilize an informal consortium with End-User sites to provide access to augmented reality equipment, VR Classrooms, telemedicine training, and artificial intelligence coursework. The online platforms of distant learning and telemedicine are feasible because they are both cost effective as well as available to larger audiences throughout Appalachia at one time. With our advanced tracking system, the detailed monitoring of the project will be possible at every stage to ensure maximum participation of the local community to ensure our funds are used efficiently.

Financial assistance is needed to obtain the broadband facility, to install telecommunications equipment at all sites, and to acquire coursework. Ongoing financial assistance is needed for the primary 3 years until membership subscriptions have grown. These funds will be used to purchase instructional material and to pay engineers to train our End User sites.

Rural residents will benefit by an increase in STEAM literacy and learn the tools needed to join the skilled technical workforce. Those seeking better health awareness will improve their lifestyle and mental health from our supplemental telemedicine program which will include content and exposure to experts in nutrition, fitness, and

3. WHO WE ARE

The Tao Learning Institute is a 501c3 nonprofit headquartered in Marietta, Ohio. We create sustainable communities of empowered and educated people around the globe by providing alternative pedagogical methods based on technology and computational learning. Utilizing the philosophy of The SMILE Method™, we make digital STEAM and telemedicine learning attractive to curious minds and we help transform participants into leaders of the future. We focus on achieving Sustainable Development Goals (SDGs) of the United Nations, the National Science Foundation's (NSF) 10 Big Ideas, and the five goals of the Appalachia Regional Commission. Participants in our programs will not only be capable of effectively handling community challenges on their own, but they also come up with viable solutions for

industry and community development. We take pride in the fact that Tao Learning has been successfully implementing SDGs throughout different regions of the world for over 25 years with great impact.

We provide training in micro-business operations in HubZones with a strong focus on the Appalachia Region as we focus on tried & true methods while sharing innovative strategies for locals to thrive. We have been involved in the Appalachia Region for the past 25 years where we continue to teach the children, inspire businesses, and contribute resources in collaboration with industry partners.

4. PROJECT COST & BREAKDOWN

Our overall project will cost \$562,910.00 with an in-kind donation of \$130,780 provided by our education partnership with Microsoft, leaving a \$432,130 grant request for this initiative. The in-kind donation provided by Microsoft will give students and faculty access to Office 365 Education tools which will be unbound to any specific hardware purchase; Office 365 only requires an internet browser to access.

Focus Pass Membership fees paid by students along with sponsorship by corporations will be used to continue this project after the initial 3-year term.

5. PROJECT STATEMENT

This project is a distant learning program and telemedicine program as defined in § 1734.3 with a predominant focus on distant learning.

6. SPECIAL CONSIDERATION

The project is requesting special consideration as this project has end-user sites in Opportunity Zones and it is providing STEM Education to participants in this zone.

7. TELECOMMUNICATION SYSTEM

The Tao Learning Institution is a Microsoft Authorized Education Partner and specializes in telecommunications for the EduTech sector. Thus, outside consulting is not necessary for this implementation.

We will utilize a Focus Pass for each student, which is a monthly subscription into a Focus Hive. This architectural structure uses Azure and Microsoft 365 as the backbone. Once registered with a Focus Pass, we will use Azure Active Directory to create accounts for each user and onboard them into the Microsoft 365 ecosystem at End-User sites. We will allow a Bring Your Own Device (BYOD) model to allow participants to access our education platform in and out of our facilities, using Microsoft Intune as the security medium.

Cisco fiber optic networks will be created at each location with wifi hotspots in key areas of each facility. Desktops and Laptop stations will be built in the End-User sites with 4K monitors and Microsoft HoloLens equipment. The Broadband Facility will feature 10Gbps optical cabling and 1Gbps FO for End-User Sites along with streaming capabilities for 20 users at a time per location.

The Broadband Facility and INSTAR Lab will both serve as media production studios. The Hub Site will provide content backup repository, be a maintenance location, and be an analytics location. All

content will reside in Azure Data Lakes with Blob Storage provided by an Azure Resource Subscription. Educational projects will be stored in Azure DevOps, utilizing Boards, Repos, and Artifacts.

MS Teams, Stream Labs OBS, and Twitch will be used for Digital Streaming of courses, with a combination of connectivity through Canon camera equipment, Logitech 4K Cams, and Focusrite audio equipment.

Communication will primarily exist on Facebook Groups for interested students, then full immersion will exist inside Microsoft Teams using our on-site equipment or the BYOD option. Educators and healthcare professionals will be facilitated by the Hub-Site and will keep a running schedule of media content to provide back to the End-User sites.

End-User sites will also have on-site Microsoft Certified Curiosity Coaches available on Microsoft Teams to facilitate on-site related curriculum and to facilitate distant learning and telemedicine interactivity for participants.

8. PARTICIPATING SITES DESCRIPTION

Tao Cottage is the main participating hub, in Marietta, Ohio. It will be equipped with innovative technology and a fiber optic network designed to host distant learning programs. It is a broadband facility that will act as the hub site. The other participating end user sites consist of another location serving Washington County Ohio, a location in Meigs County Ohio, a location in Gallia County Ohio along with a location in Jackson County West Virginia.

Type	Name	City	Population
Hub Site	Tao Cottage	Marietta, OH	14,085
End User	BB2C Epicenter	Marietta, OH	14,085
End User	Lone Oak Farms	Racine, OH	3,898
End User	Ravenswood Senior Multipurpose Center	Ravenswood, OH	3,876
End User	INSTAR Lab	Gallipolis, OH	3,843

9. TAO LEARNING APPALACHIA CONSORTIUM

The Tao Learning Appalachia Consortium is an informal consortium, comprised of supplemental learning centers with a focus on STEAM literacy and telemedicine. Each End-User site provides leased space within their facility to The Tao Learning Institute where our organization will administer all distant learning and telemedicine programs. The Tao Learning Institute will act as the fiscal agent and will retain ownership of all equipment at each End-User Site.

10. NON-DUPLICATION OF FACILITY CERTIFICATION

As a prospective primary participant recipient of assistance from RUS, this organization commits to carry out RUS' established policy to comply with the requirements that no facilities using financial assistance will duplicate adequate established telemedicine services or distance learning services.

The Applicant hereby certifies that as a prospective recipient under the said Distance Learning and Telemedicine Loan and Grant Program, that it will not use RUS grant funds to duplicate any adequate

established services as referenced above. certify that facilities constructed with grants do not duplicate adequate established telemedicine or distance learning services.

11. PARTICIPATING SITES LISTING

Below is a listing of the location of each end-user site.

Type	Name	Site Address	City	Population
Hub Site	Tao Cottage	125 Frederick St	Marietta, OH	14,085
End User	BB2C Epicenter	107 Lancaster Street	Marietta, OH	14,085
End User	Lone Oak Farms	44391 Yost Rd	Racine, OH	3,898
End User	Ravenswood Senior Multipurpose Center	511 Washington St	Ravenswood, OH	3,876
End User	INSTAR Lab	1419 State Route 7 N	Gallipolis, OH	3,843

PUBLICLY RELEASABLE PROJECT DESCRIPTION

1. Title: Distant Learning & Telemedicine in Appalachia
2. Description of the proposed hub/end-user and end-user site(s):
 - a. Our Tao Learning Appalachia Consortium consists of a Hubsite in Marietta, Ohio that also acts as an end-user site along with another location serving Washington County Ohio, one location in Meigs County Ohio, one location in Gallia County Ohio, and one location in Jackson County West Virginia.
3. A brief description of project:
 - a. Our Distant Learning & Telemedicine in the Appalachia Region initiative gives students in the surrounding rural area access to exciting STEAM literacy and supplemental telemedicine programs available at our sites. This program upskills workers with technical skills and prepares them for enterprise and large industry careers provided by local manufacturing and remote jobs. Students will gain access and training in a variety of STEAM subjects of their choice, including advanced training in Quantum Computing, Mixed Reality VR, and Business Intelligence for a boost in their career to be futuristic and innovative.
 - b. Our supplemental telemedicine program offers access to publications and digital programming that includes nutrition information, weight loss guidance, diabetes information, mental health digital programs, and training in Allied Health.
4. Total estimated population affected by proposed project:
 - a. The project will be available to a rural population of 17,928 in the Appalachia Region

###

C. SCORING CRITERIA DOCUMENTATION

Rurality

Site #	Site Name	Site Designation	Place Name	Census Population	Rurality Score
1	Tao Cottage	Hub Site	Marietta, OH	14,085	--
2	BB2C Epicenter	End-User	Marietta, OH	14,085	20
3	Lone Oak Farm	End-User	Racine, OH	3,898	40
4	Ravenswood Senior Multipurpose Center	End-User	Ravenswood, WV	3,876	40
5	INSTAR Lab	End-User	Gallipolis, OH	3,843	40

Applicant's Estimated Rurality Score (Sum of Rurality Points ÷ # of End-User Sites)	35	<i>Rurality Score</i> (For Agency Use)	
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Economic Need

Site Number	Site Name	Site Designation	County	SAIPE Percent Poverty, All Ages
1	Tao Cottage	Hub/End-User	Washington	15.9%
2	BB2C Epicenter	End-User	Washington	15.9%
3	Lone Oak Farm	End-User	Meigs	17.8%
4	Ravenswood Senior MultiPurpose Center	End-User	Jackson	16.7%
5	INSTAR Lab	End-User	Gallia	22.1%
Average SAIPE % for End-User Sites (Sum of % Poverty ÷ Number of Sites)				17.7%

Applicant's Estimated Economic Need Score (Enter Points from Scoring Table)	10	<i>Economic Need Score</i> (For Agency Use)	
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Special Consideration

Our Project's primary purpose is

STEM (Science, Technology, Engineering or Mathematics) Education

 X

Opioid or other Substance Use Disorder Treatment Services

or

Our Project has one or more end-user sites in an Opportunity Zone X

I hereby request Special Consideration Points and have adequately supported the request in the appropriate application sections.



Matthew Hackney (Apr 10, 2020)

Signature of Authorized Representative

04/10/2020

Date

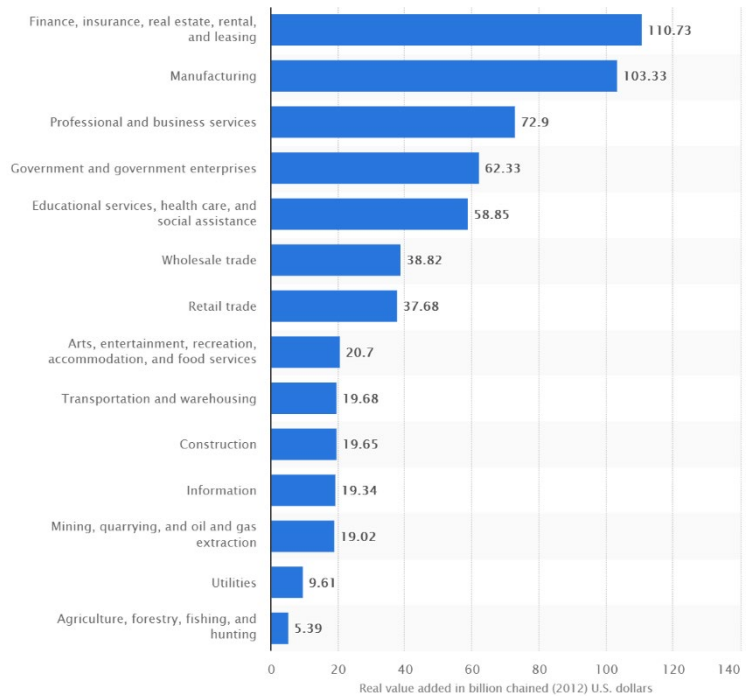
Additional Special Consideration Points (for Agency Use)	
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C-4 NEED FOR SERVICES AND PROJECT BENEFITS:

THE RURAL WORKFORCE

Many families in the areas we teach have been farmers for centuries. They are quite resilient to new technology, so a large portion of our coaching is to shift their mindset into seeing a hybrid lifestyle where they embrace the outdoors and agriculture while blending a newfound appreciation for innovative sciences. This means they enter our SMILE Spaces™ and get a first-hand look at digital spaces which naturally utilize rooms and give access to new tools to make their rural life easier.

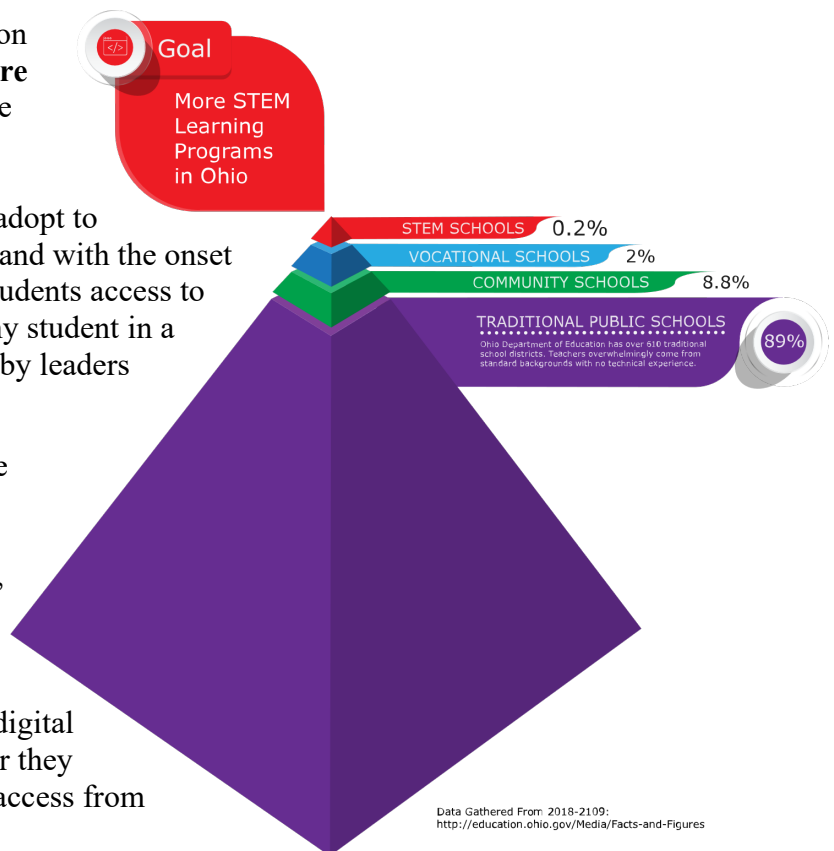
As seen in the chart to the left, Agriculture is the lowest GDP for Ohio in 2018, so we need to help career seekers in rural areas learn new skills to gain employment in the workforce.



CREATE MORE STEAM LEARNING

As noted in the 2018-2019 Ohio Education Facts & Figures, **only 0.2% of schools are categorized as STEM Schools**. Thus, we have a strong need to set a new push for STEAM curriculum, especially in rural environments that usually are the last to adopt to educational changes. With this initiative and with the onset of digital tools, we will be able to give students access to STEAM material at the same speed of any student in a metropolitan environment or as outlined by leaders such as Silicon Valley.

Our pedagogical approach will reflect the market trends in IT and as requested by industry so students can use our learning spaces to enter the market fully prepared, no matter how far they might live outside city limits. Students will not be limited to our spaces either, though. As discussed in the next section, we have a digital membership that stays with them whether they access from one of our end-user sites or access from their own equipment from home.



NEED FOR SERVICE

While our Hub Site has been able to effectively provide classes for over 10,000 students worldwide in 2019, the lack of on-site equipment prevents students who do not have their own equipment to access our digital network and coursework. We currently do not own this Hub Site and cannot update it without an acquisition, either. A full acquisition of this location will allow us to convert it to a Broadband Facility where we can create media content and then broadcast our material to all End-User sites.

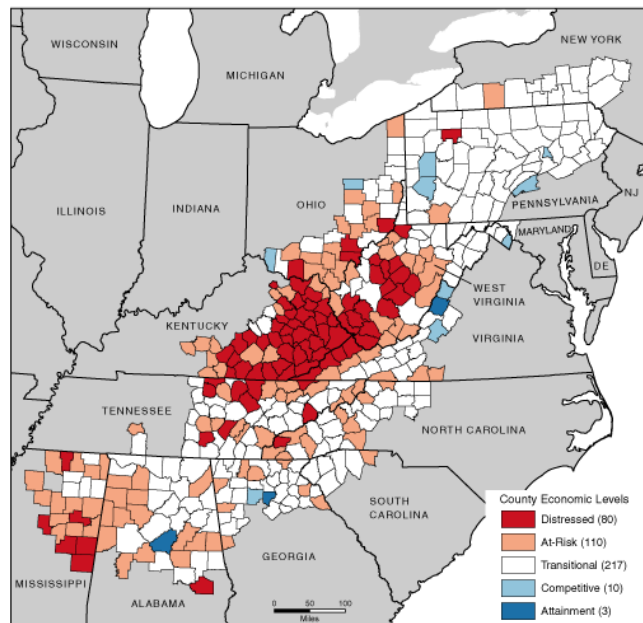
Funding from this grant is needed so we can provide appropriate equipment at Hub and End User Sites. Funding is also needed to acquire capital assets in coursework and curriculums for these sites. This program will provide those with the most economical hardships access to our programs directly in their rural communities.

With multiple end-user sites located in even more rural areas, we will be able to provide access to our STEAM Literacy and Telemedicine tools and training to then help these participants gain much needed employment and receive general healthy lifestyle benefits. The counties we are serving have been Distressed, At-Risk, or Transitional according to the Appalachian Regional Commission for the past 20 years.

Our main goal is to help teach the skilled technical workforce needed for manufacturing and enterprise industries found in this region to help stabilize these counties and shift their economic levels to become competitive.

This grant will provide funding for our core areas of existing presence. Then we will be able to expand into other counties at the end of the 3-year term at a much lower cost due to owning the Broadband Facility and having strong, streamlined coursework for the initial locations.

Another goal is to help participants and students find new avenues of employment by tapping into technology sectors that do not limit employees or entrepreneurs from geographical barriers. Our digital training connects these participants with a global network of resources and customers to inspire their ideas and help grow micro-businesses.



Created by the Appalachian Regional Commission, June 2019
Data Sources:
Unemployment data: U.S. Bureau of Labor Statistics, LAUS, 2015–2017
Income data: U.S. Bureau of Economic Analysis, REIS, 2017
Poverty data: U.S. Census Bureau, American Community Survey, 2013–2017
Effective October 1, 2019 through September 30, 2020

We have worked with the local community in this region for over 20 years by hosting workshops, trainings, and events to increase STEAM literacy. Our events over the last decade have had local participation by over 5,000 community members. In a community this rural, those numbers show how excited and involved this community is on our previous engagements. Statistics of this can be seen by our Lone Oak Farm equestrian workshop participation list, the Health Literacy program developed for Mothers with our Mother's Day 5K Run which we've hosted for 10 years in Washington County, Ohio, and the craft event participation at the Ravenswood Senior Multipurpose center. Statistics are sited with

the River City Runner's Club, an affiliated 501c3 non-profit and with each organization individually. By obtaining this grant, these existing community-based organizations will be empowered to use our tools and resources on an even deeper level. This grant will allow for better digital tracking of our participation so we can share business intelligence and fiscal analysis of each of our programs with transparency.

SUPPORT FOR PROJECT BY PROFESSIONALS

Dr. Olita Otte, Anesthesiologist in Pennsylvania

"In my early thirties, despite training for sprint triathlons, I started losing my athletic build. I began to see cellulite on my thighs and felt more tired at the end of each day..... I recovered quickly as an Anesthesiologist after multiple 12 hour shifts due to Tao Learning's nutrition advice and cross training plan. Before the Tao Learning Institute's training plan rejuvenated my body, I thought this would be my last marathon. But now, my spirit is also renewed and with this new motivation I look forward to more challenges ahead."

Dr. Richard Blackburn, General Physician – Family Health in Appalachia

"While Tao Learning Institute's advice is quite technical for many, those in the medical field should pay attention. The Institute goes over things I heard about in medical school and it refreshed my mind to put things into perspective. Having lost 80lbs in a few short months, I can gladly recommend this program to anyone trying to lose weight and interested in keeping the pounds off."

M.S. Suzanne Conejos, Assistant Physics Professor, Ohio University Doctor

"The exposure to quality learning experience for rural students that explore the boundaries of curiosity is crucial to the growing scientific community. The research and learning opportunities provided with INSTAR Lab by the Tao Learning Institute are a great resource for the Appalachia community.

Having acted as an instructor in Institutes of Higher Education and volunteering with rural communities in Ohio and Globally, I give my full endorsement to the extended funding and implementation of INSTAR Lab curricula."

D. MATCHING REQUIREMENTS

Microsoft will be providing an in-kind donation valued at \$130,780.00 with use of Office 365, Azure Subscription, and Dynamics 365 for the uses in this project.

1. All line items will be used exclusively for eligible purposes.
2. None of the use is to benefit sites not shown in the scoring.
3. The predominant purpose (over 50% of use) of every line-item is for purposes which meet the DLT grant definition of distance learning.

Site Name	Description	Unit Cost	# of Units	In-Kind Donation
All Sites - 2 per Site	Dynamics 365 - 36 Month Licensing	\$40,000.00	10	\$40,000.00
Tao Cottage	Azure Resources - 36 Month Subscription	\$10,500.00	1	\$10,500.00
All Sites	Office 365 Faculty A1 - 36 Month Software Licensing	\$432.00	40	\$17,280.00
All Sites	Office 365 Student A1 - 36 Month Software Licensing	\$180.00	350	\$63,000.00
Total Donation:				\$130,780.00

The Office 365, Azure, and Dynamics 365 licensing above is priced at current monthly rates and calculated over a 3-year timeline. Our attached documentation shows Microsoft's commitment to providing this in-kind donation to our organization over the lifetime of this grant.

Matthew Hackney

From: Microsoft Online Services Team <msonlineservicesteam@email.microsoftonline.com>
Sent: Monday, January 14, 2019 5:30 PM
To: Matthew Hackney
Subject: Approved: Your request for eligibility as an academic institution

[View this email in your browser.](#)



Your request is approved

Organization: Tao Learning

Domain: taolearning.org

We have verified that Tao Learning is eligible as a Microsoft Qualified Academic Institution. You can purchase subscriptions from Microsoft Online Services using academic pricing.

Your current academic trial offer will expire at the end of the trial period. You can purchase subscriptions as an eligible academic institution in your service admin site.

Please visit [Support](#) if you have any questions regarding this email.

Sincerely,
The Microsoft Online Services Team

This is a mandatory service communication. To set your contact preferences for other communications, [click here](#).

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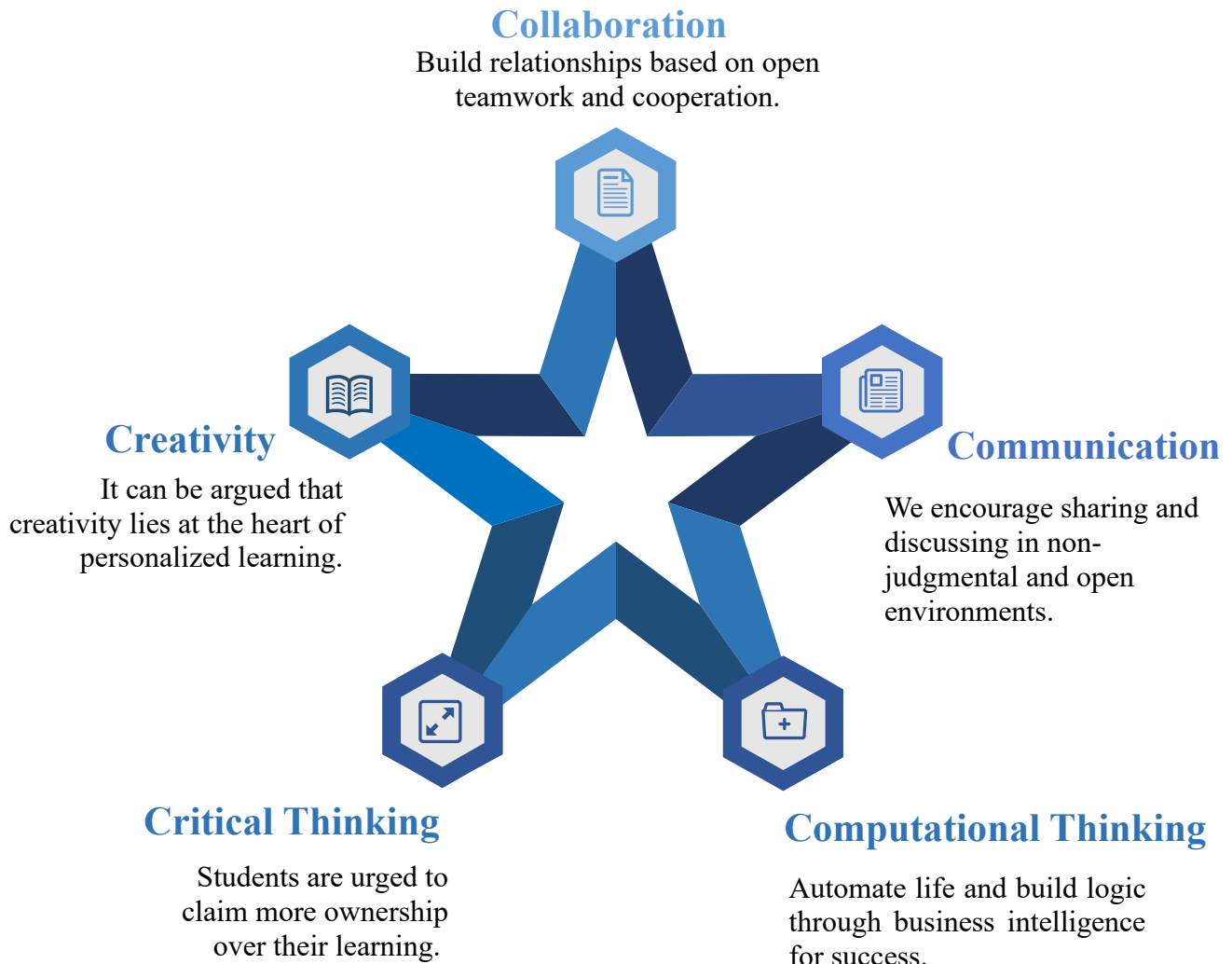
E. SCOPE OF WORK

Overview

We have three distinct delivery frameworks to empower rural communities with STEAM literacy. We blend R&D from our INSTAR Lab into our SMILE Spaces™ where students get to access knowledge and learn. Then we give students and members access to a Focus Pass which they can use at our End-User sites or from their own devices to access digital learning from any location.

5 Cs of Education

Our pedagogical approach will focus on the 5 Cs of Education, the pillars of learning innovative areas important for future generations joining the workforce. This approach shifts focus away from traditional education and into areas which promote self-learning, social interaction, and technical abilities using business intelligence needed in an ever-changing society.



SMILE Spaces™ in the Mid-Ohio Valley

The SMILE Method™ - Self-Motivated Impact Learning Environment Method utilizes modern procedures to ignite curiosity. We promote distant learning in rural areas by utilizing hive mentality and our cloud friendly digital platform. Our SMILE Spaces™ in the Appalachia Region consist of quiet and peaceful work/study education centers. Here, students guide their own learning through advanced technological tools. We have created a hub-site with four end-user sites design as SMILE Spaces™.

Focus Pass to Access the Curiosity Community

A Focus Pass gives students access to our Curiosity Community which has over 10 business sectors and partnerships for members to access and learn enterprise software. Students can participate on their own, through job shadowing, through experiential learning opportunities, and even build their network for career advancement. Our end-user sites give access to this community where rural students gain opportunities usually unique to large cities. Each SMILE Space™ is an onboarding hub to develop lifestyle shifts into exploring this vast network.

Our digital learning gives them exposure and builds technical literacy in the enterprise software used by Fortune 500s. This new approach to STEAM education is encouraging for students who live far away from city centers and who desire to gain awareness and build technical skills. Once basic literacy of the system is understood, students are encouraged to explore the Curiosity Community with their Focus Pass subscription outside of our SMILE Spaces™, treating them like libraries instead of classrooms. In this fashion, we can service entire communities with just a few workstations, as students will only show up a few times a month to see new creations or for on-site workshops. Then, they can continue their learning at their own pace by connecting back with us online.

Innovation at our INSTAR Laboratory

INSTAR Laboratory pioneers advanced scientific research for exploration and mapping of the universe known and unknown with full transparency for public consumption. Students will be given the opportunity to work alongside scientists and observe their research at end-user sites. Students will use machine learning and data science curriculum built in partnership with local aerospace & manufacturing companies.

Students not only get a chance to use innovative hardware and software with us in our Research Lab, but we also make new discoveries that then can be implemented into our SMILE Spaces™ and built into our focus pass memberships. INSTAR Lab prioritizes many of the 10 Big Ideas outlined by the National Science Foundation. We have an expert focus in:

- The Quantum Leap: Leading the Next Quantum Revolution
- Harnessing Data for 21st Century Science and Engineering
- Mid-scale Research Infrastructure
- Work at the Human-Technology Frontier: Shaping the Future
- NSF INCLUDES: Enhancing STEM through Diversity and Inclusion
- Windows on the Universe: The Era of Multi-messenger Astrophysics
- NSF 2050: The Integrative Foundational Fund
- Understanding the Rules of Life: Predicting Phenotype
- Growing Convergent Research at NSF

SMILE SPACES™ IN APPALACHIA

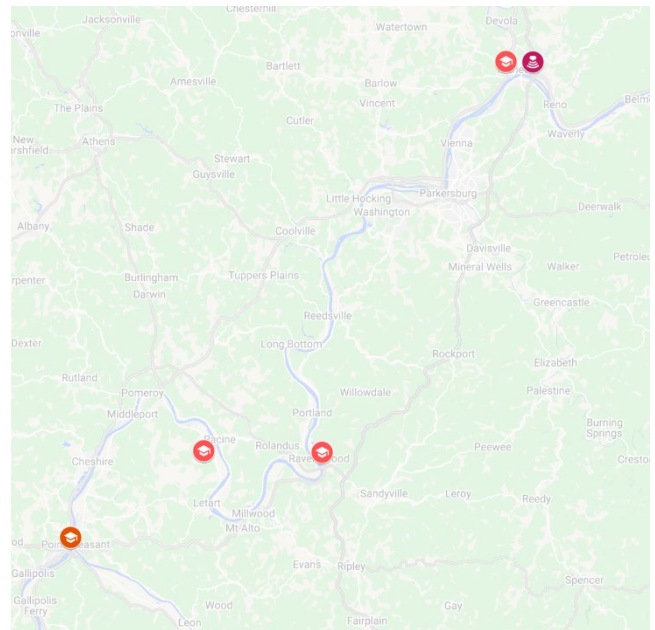


We encourage learning from preschool all the way to career growth with a SMILE - a Self-Motivated Impact Learning Environment. In this method, students go through a 5-step process to encourage themselves, ignite their own curiosity, find inner passions, collaborate with like-minded individuals who share similar goals and who are discovering the same subjects, and finally to engage in community development to share wisdom back with those who need it most.

1 HUB SITE & 4 END USER SITES

Hub Site in Marietta, Ohio

End User Sites in:
Marietta, Ohio
Ravenswood, West Virginia
Racine, Ohio
Gallipolis, Ohio



CONNECTED FOR THE FUTURE

We will create new curriculum that matches careers needed in the future based on our research and partnerships with enterprise industry. Our technical expertise in Cloud Computing, Business Intelligence, and other aspects of soft skills will all be shared with students at our SMILE Spaces™. Existing learning environments will be upgraded with new equipment and IT so students can continue

their journey into the field of STEAM. Our curated approach will put front and center to each student access and material to next generation software for their independent exploration.

Students will be of all ages and backgrounds as our SMILE Spaces™ have an agnostic approach to observing who is a student. This will allow many in rural settings who may have never had a chance to use technology to adopt to new skills.

With our connection to industrial and enterprise partners, participants will be given opportunities to gain internships and employment directly from our partners either during or after their membership with us. Our staff, considered Super Librarians, provide the space and atmosphere needed to develop remote working skills and the encouragement to step into this new field of work.

PEACEFUL FOREST SETTINGS

Each SMILE Space™ is carefully selected to embrace its surroundings. As many of our centers are in rural areas, we create multipurpose rooms so our students can create a lifestyle around technical careers. This means we use Murphy Beds that convert into desk space and spare bedrooms become offices and studies.

This encourages our participants to approach their own rural housing with a new perspective and they quickly realize they can convert their own houses into similar settings. By doing so, we promote remote work in STEAM fields, one of the fastest growing fields in America. This starts with an adoption of high-speed fiber optics and great computer equipment to match in tranquil environments.



DIGITAL COMMUNICATION SPACES

Working remotely and studying remotely comes with many challenges. Our SMILE Spaces™ are carefully designed with noise-cancelling audio equipment, great ambient lighting, and are filled with abundant natural lighting by our use of large windows and sunrooms. This creates a new appreciation for learning as our rural students who are so used to spending time outdoors can now enjoy forests, gardens, and outdoor landscapes from the comfort of indoors all while learning new technology. Our end goal is a cultural shift away from viewing rural communities as disconnected and hard to reach.

The high tech equipment we install is so well connected to our city partners that the rural participants become immersed into our digital community with ease; they suffer no degradation in quality of our meetings and have no noise disturbances to members on the other end who are used to professional enterprise settings and digital etiquette.

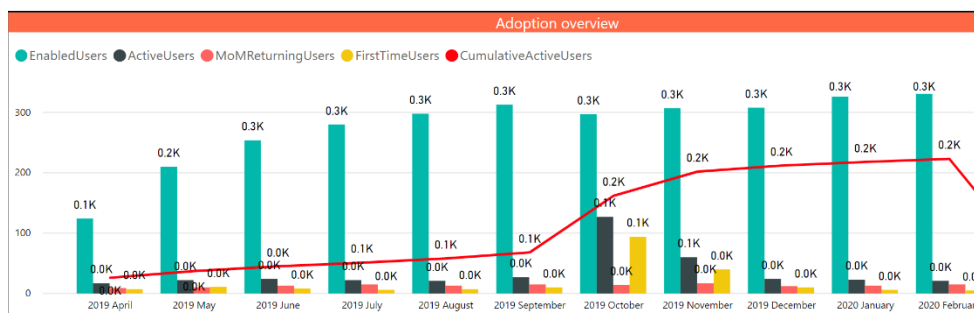
FOCUS PASS TO ACCESS THE CURIOSITY COMMUNITY



FOCUS HIVE

Students sign up with a Focus Pass, which will give monthly access to a plethora of digital tools. Instead of our budgets going to curriculum creation, we primarily curate existing curriculum designed by our enterprise partners and then our Super Librarian assist students to onboard into these digital environments. In this way, we can quickly add new curriculum as the industry makes it available to the non-profit or public sectors. The Super Librarians only need training in how to access the material and how to ignite curiosity into students. They do not need specialized skills in each new area we adopt.

We have a curated list of programs and tools that we feel are most relevant in today’s fast-paced digital world. We also have created the Curiosity Score, as shown in the figure to the left. This score tracks user participation and provides analytics on their overall approach to the software and tools they decide to use.



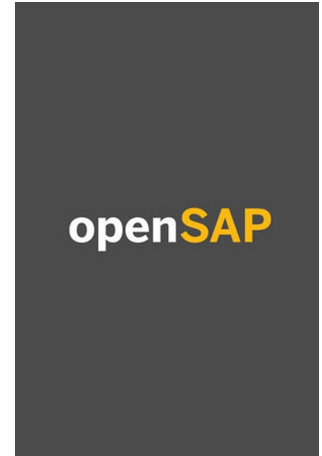
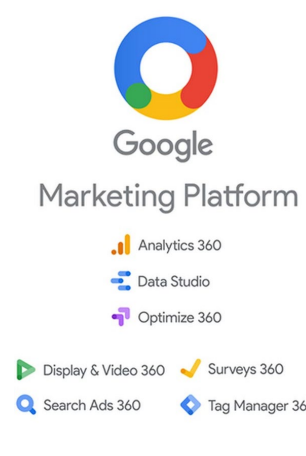
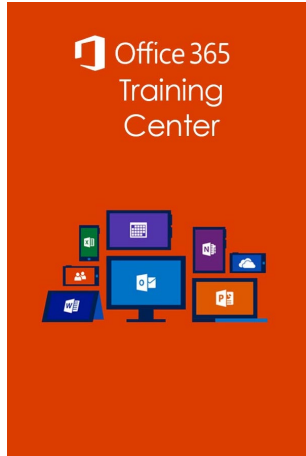
Our Super Librarians found at each SMILE Space are not teachers, but are Masters of Research and Masters of Curiosity; they are tasked with helping students become independent learners. They use the Curiosity Score to

check just how curious students are in our quest to create digital experts out of the next generation of skilled workers.

The Focus Pass is split into two sections, depending on student interest. We have the Ignite Curiosity Program to increase general knowledge of business development tools and operations. Then, our Developer Dojo is geared towards students interested in the next generation of learning with Artificial Intelligence, Machine Learning, Quantum Computing, and Mixed Reality.



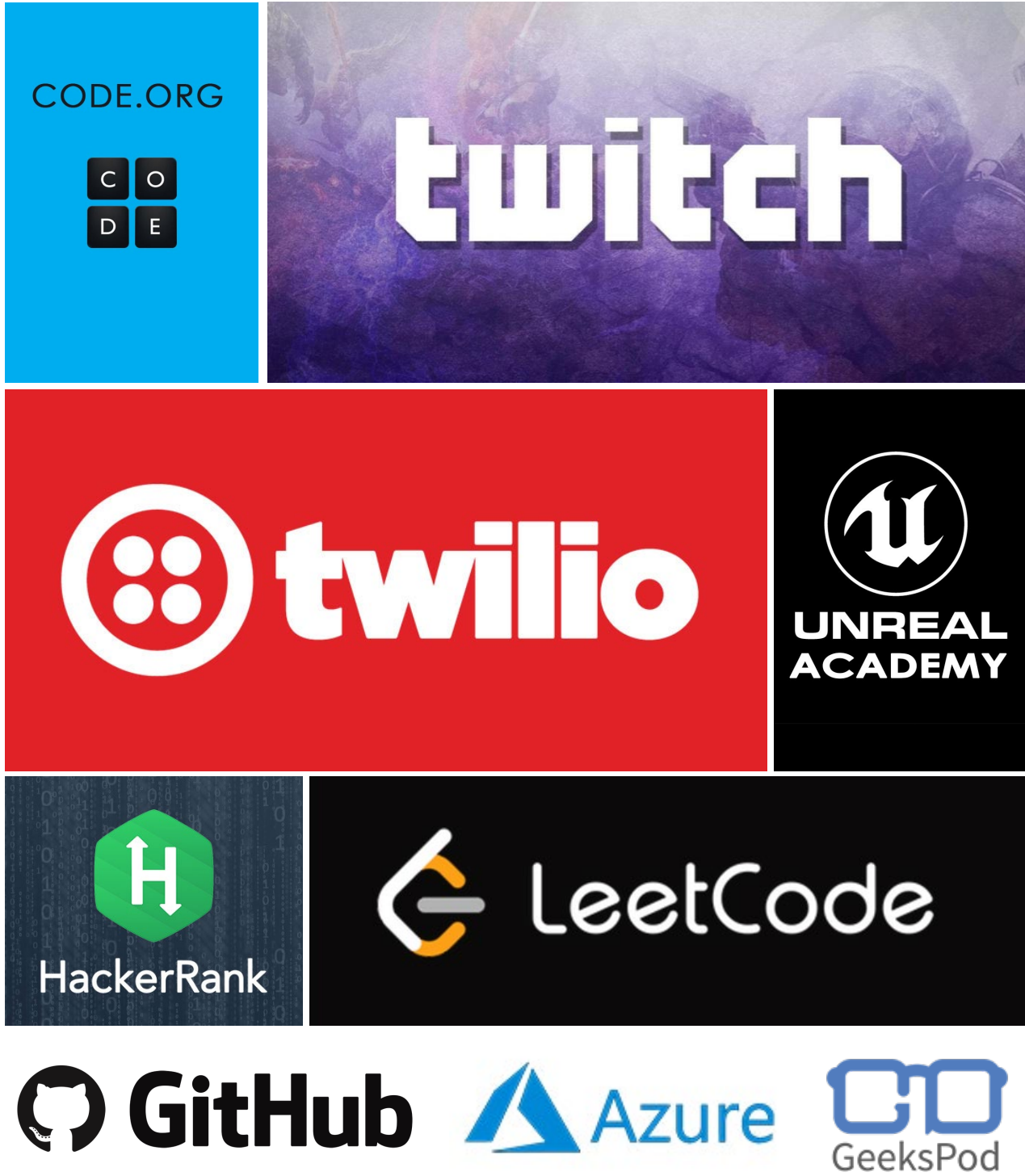
IGNITE CURIOSITY



Grow with Google



DEVELOPERDOJO



FINDING PASSION FOR LEARNING

The basic concept of our Ignite Curiosity program has a strong foundation on changing lifestyle habits to see learning as fun, creative and finding passion for knowledge. It is through this program that we can shift the rural students into a strong workforce and give them opportunities unlike before.

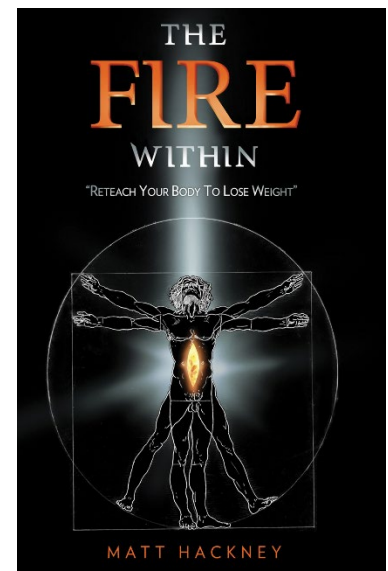
They are joined online by students worldwide from multiple SMILE Spaces™ we have created including those in Asia, Africa, and Europe. This gives students multi-cultural exposure and teaches social etiquette very hard to find in rural environments. The soft skills they will develop will be crucial to their success in the industry once they go for actual careers.



TELEMEDICINE FOR MINDFULNESS: PUBLICATIONS

We will acquire and create coursework on the subject of mindfulness and general health to distribute to our End-User sites. This information will be supplemental to the formal health systems and will be used for preventative measures against diabetes, obesity, and mental health issues such as depression, addiction, and substance abuse.

“The book outlines how to properly increase our metabolism by eating small and frequent meals. It then goes over healthy meal planning habits and teaches the basic fundamentals of cross-training in exercise. Besides stressing proper eating instructions, The Fire Within also allows the readers to maximize their own body’s ability to metabolize food at the optimal rate.”



The material used, such as *The Fire Within* by Matt Hackney has been in publication for over 10 years with a proven track record by Physicians to prevent Type II Diabetes and to be effective in collaboration with a Physician’s guidance. While moderate exercise can help, the secret to *The Fire Within* is maintaining the “internal fire” through the concepts of - fuel, oxygen, and spark. Breaking down these three simple ideas, Mr. Hackney enables any reader to understand the concepts and make necessary changes to improve personal health.

Funding for this program will revitalize this material along with dozens of health-related videos included in an Airikai mindfulness fitness program. Funding will allow for acquisition of this program and for the media production to continue creating content in this telemedicine series. Curiosity Coaches at End-User sites will become specialists in the material to guide students on-site as well.



BUSINESS TRAINING WITH DR. HUFFMAN

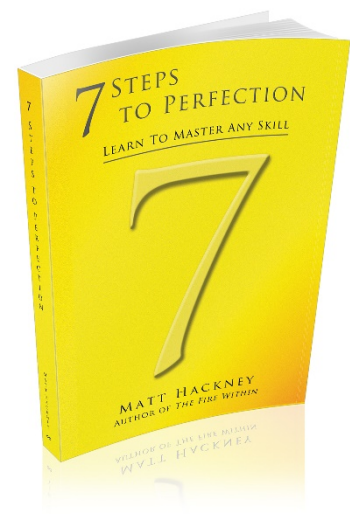
We will create coursework for MSMEs - Micro, Small, and Mid-Size Enterprises by Dr. Huffman who has been a business development professor at multiple Universities throughout ARC states. Our material will be created in partnership the Toyota Production System Support Center (TSSC), a not-for-profit corporation affiliated with Toyota Motor Engineering & Manufacturing North America, Inc. We will establish curriculum aligned with the Toyota Way with an emphasis on Agile Methodology and international standards to accelerate business development and entrepreneurship in this region. The material will feature various enterprise literacy helpful in the industrial market and microbusiness sector.

The program will provide opportunities for applied business practices through experiential learning with local businesses and local industry. This will benefit the existing business structure as more job shadowing and awareness will be created. Then, we will act as a catalyst for career advancement and onboarding as we streamline our curriculum with the industry needs at the largest employers in each area.

SWARM INTELLIGENCE SYSTEM™

We have built a SWARM Intelligence System™ where students are encouraged to interact socially online with one another while contributing to experiential learning. We have created coursework and this funding will provide necessary resources to create new editions and print our publications such as 7 Steps to Perfection, which teach the importance of trail & error. Funding will also allow us to create Teacher Editions of this coursework and audiobook versions for a more interactive experience at End-User locations.

We teach students and educators the importance of using Minimal Viable Products (MVP) philosophy at all stages of production in manufacturing and technical settings. We will update this material to blend with our other coursework of popular Japanese strategies for



business management such as KanBan, Kaizen, Hoshin, Heijunka, and Jidoka.

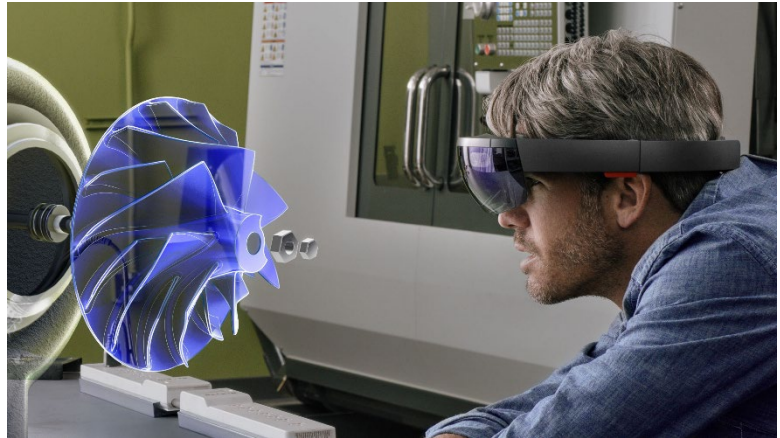
INNOVATION AT OUR INSTAR LABORATORY



INSTAR Laboratory has worked with Microsoft Research and utilizes both Microsoft Research materials as well as the IBM Q, using Qiskit for innovative research. The scientists involved also are working on machine learning algorithms to better map our stars and provide compelling data back to the scientific community.

Students get access during their membership with us to work alongside our scientists and are encouraged to make their own discoveries. Rural settings provide unique opportunities to get into astrophysics and do interstellar research, as there is not a problem of light pollution in the areas of our SMILE Spaces™.

INSTAR provides access to mixed reality equipment and oversight to our centers desiring to implement new material into their curriculum. We continue to conduct research and innovate pedagogical methods with a focus on careers needed 20 years in the future.



QUANTUM LITERACY

It is no longer needed to be an astrophysicist to study quantum reality. A shift is happening where science needs those who have a strong understanding of quantum computers. IBM and Microsoft have both given access to their quantum computers from anywhere in the world. This allows us to implement quantum into our curriculum and give rural students access to research and work directly with real quantum computers.

We give exposure to Quantum Development Kits at our center along with Q# language and Qiskit, all needed in the growing world of quantum computing.

INTERSTELLAR RESEARCH



New technology and machine learning allow for incredible research done from smaller telescopes and compact equipment. We have curriculum which teaches how to take astronomy photos and how to find existing data online to then perform data science. Once students feel confident with this using our advanced technology, we will also expose

them to coursework which uses consumer grade equipment so they are empowered outside our lab. They can then perform professional grade research with nothing more than a smart phone, DSLR, and a laptop. This empowers a new wave of astronomy researchers and the rural communities with limited access can fully participate as technology as advanced so much that there are no longer boundaries for them.

We take this a step further and teach Machine Learning algorithms to aggregate data and to create beautiful data science visualizations. Students participate every step of the way.

MIXED REALITY WITH MICROSOFT HOLOLENS

Microsoft and our education partners such as Toyota have invested heavily into mixed reality, blending visualization tools into their workforce and hardware. We will utilize Microsoft HoloLens technology with students to give access to curriculum and training not possible in-person, such as the ability to work directly on space rockets, perform deep sea exploration, and to manipulate machinery in a learning environment.

Our industry partners will assist in curriculum design, as they have endorsed our efforts and will hire the students who come from our program. The Appalachia Region is filled with manufacturing and industrial complexes which will influence the curriculum and training we provide on this equipment.



 Microsoft HoloLens

BUSINESS AUTOMATION

We have developed a SWARM Intelligence System™ that teaches students the importance of collaborating and working as a team, but then to automate their workload. Much of the future will be

about artificial intelligence and business automation. The new generations will not need to memorize but will need to quickly research data and then wrangle this data into systems to streamline operations.

In this department, we expose students to our philosophy of business which prioritizes automation over work, a paradigm shift away from traditional schooling. This will allow career candidates who come from our program to easily work in white-collar jobs that are needed to automate today's current blue-collar industry.

They will get hands-on experience with Dynamics 365, Twilio, Azure, and other complex systems used in enterprises all from our rural SMILE Spaces™.

ARTIFICIAL INTELLIGENCE

Many rural workers have been in call centers, worked as assistants, and have been the secretarial backbone of America. A new wave of employee is emerging which needs to be skilled in building chat bots, building social media communication systems, and guiding consumers into funnels.

We build on top of Microsoft L.U.I.S. and other futuristic social intelligence systems. Our SMILE Spaces™ will push students to think differently about work. They will be asked constantly, "How can you build AI models to achieve your work?" This new approach to education will shift their thinking and keep their skills relevant in the workforce of tomorrow.

Timeline Overview

Upon award, we will establish fiber optic links and data connections to each site and start testing the User Experience at each location.

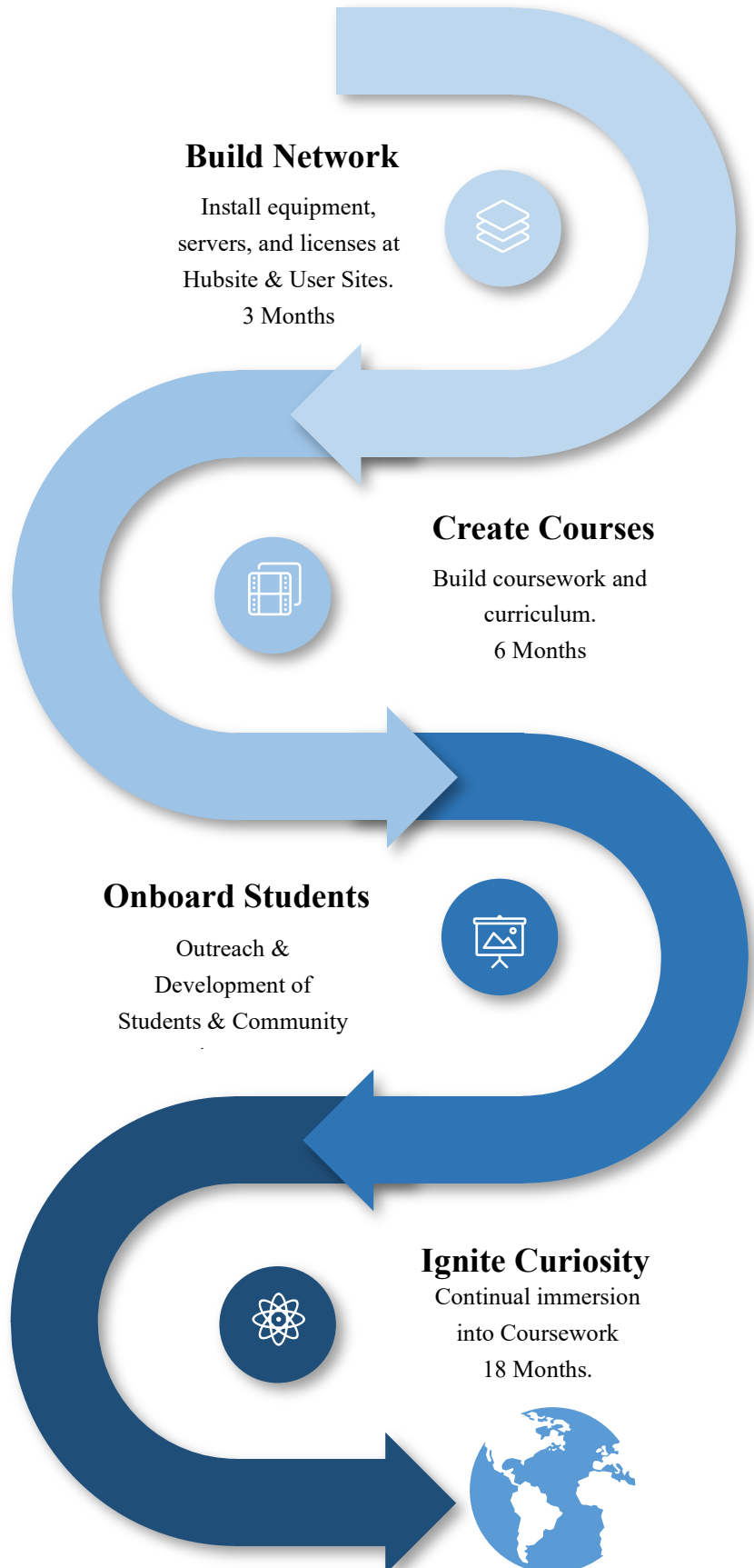
While we are creating course material, our End User Curiosity Coaches will be trained to our standards and given specialized focus areas as determined relevant for their community and their demographics.

We will continue to train Curiosity Coaches while onboarding students. The Hub Site will monitor progress of each student and provide feedback to the Curiosity Coaches to adjust and retrain as necessary.

The students will access experts from our Hub Site and other digital tools we create. They will use the SMILE Method™ to learn and even contribute content to expand the knowledge base of the system.

By the 2nd year, our program will gain popularity in rural communities and we will establish deeper connections with industry partners. These partners will start to contribute enterprise training resources and start recommending future workforce purchase memberships.

In the 3rd year we will have a saturated student base at all End User sites and will seek new relationships in other districts of ARC Communities to build new End User sites for new students.



Budget Worksheet

Line Item #	Site Name	Description	Unit Cost	# of Units	Extended Cost	
					Grant and Cash Match funds	In-Kind Match
1	Tao Cottage	Tao Cottage in Marietta, OH	\$108,000	1	\$108,000.00	
2	Tao Cottage	Microsoft HoloLens	\$3,500.00	2	\$7,000.00	
3	BB2C Epicenter	Microsoft HoloLens	\$3,500.00	2	\$7,000.00	
4	Lone Oak Farm	Microsoft HoloLens	\$3,500.00	1	\$3,500.00	
5	Ravenswood Senior MultiPurpose Center	Microsoft HoloLens	\$3,500.00	1	\$3,500.00	
6	INSTAR Lab	Microsoft HoloLens	\$3,500.00	1	\$3,500.00	
7	Tao Cottage	Desktop Server	\$3,000.00	4	\$12,000.00	
8	BB2C Epicenter	Microsoft Surface Pro 7 + Pen	\$1,850.00	6	\$11,100.00	
9	Lone Oak Farm	Microsoft Surface Pro 7 + Pen	\$1,850.00	4	\$7,400.00	
10	Ravenswood Senior MultiPurpose Center	Microsoft Surface Pro 7 + Pen	\$1,850.00	4	\$7,400.00	
11	INSTAR Lab	Desktop Server	\$3,000.00	2	\$6,000.00	
12	All Sites - 2 per Site	Dynamics 365 36 Month Licensing	\$40,000.00	10	-	\$40,000.00
13	Tao Cottage	Azure Resources 36 Month Subscription	\$10,500.00	1	-	\$10,500.00
14	All Sites	Office 365 Faculty A1 36 Month Software Licensing	\$432.00	40	-	\$17,280.00
15	All Sites	Office 365 Student A1 36 Month Software Licensing	\$180.00	350	-	\$63,000.00
16	INSTAR Lab	Monoprice Entegrade 1000FT Cat7 1000MHz S/FTP	\$400.00	6	\$2,400.00	
17	INSTAR Lab	Mediabridge Cat7 Connector: 30 Pack	\$60.00	5	\$300.00	
18	Tao Cottage	Cisco Catalyst 9200	\$6,400.00	1	\$6,400.00	
19	INSTAR Lab	Cisco Catalyst 9200	\$6,400.00	1	\$6,400.00	
20	BB2C Epicenter	Cisco Catalyst 9200	\$6,400.00	1	\$6,400.00	
21	Lone Oak Farm	Cisco Catalyst 9200	\$6,400.00	1	\$6,400.00	
22	Ravenswood Senior MultiPurpose Center	Cisco Catalyst 9200	\$6,400.00	1	\$6,400.00	
23	Tao Cottage	Canon EOS-1D X Mark II DSLR Camera	\$6,000.00	1	\$6,000.00	

24	All End-User Sites - 1 per Site	Canon 5D Mk IV	\$3,000.00	4	\$12,000.00	
25	Tao Cottage	Film Lighting Kit	\$3,000.00	1	\$3,000.00	
26	All Sites - 5 per Site	ViewSonic VX3211-4K-MHD 32 Inch 4K UHD Monitor	\$400.00	20	\$8,000.00	
27	All Sites - 1 per Site	Logitech BRIO Webcam	\$220.00	5	\$1,100.00	
28	INSTAR Lab	Sennheiser MKE600 Shotgun Microphone Kit	\$700.00	1	\$700.00	
29	Tao Cottage	Sennheiser MKE600 Shotgun Microphone Kit	\$700.00	1	\$700.00	
30	All Sites - 1 per Site	NETGEAR Nighthawk AX12 12-Stream Wifi 6 Router	\$600.00	5	\$3,000.00	
31	Tao Cottage	Azure Cloud Architecture	\$5,000.00	1	\$5,000.00	
32	All Sites - 1 per Site	Adobe Creative Cloud	\$1,000.00	5	\$5,000.00	
33	Tao Cottage	Instructional Programming for all Coursework	\$35,000.00	1	\$35,000.00	
34	All Sites	Installation & 3-Year Maintenance of Equipment	\$35,000.00	1	\$35,000.00	
35	INSTAR Lab	Canon EF CN-E Cinema Prime 7-Lens Kit	\$28,000.00	1	\$28,000.00	
36	INSTAR Lab	Canon EOS C500 Mark II	\$17,000.00	1	\$17,000.00	
37	INSTAR Lab	K 5600 Lighting Joker-Bug 200-Watt HMI	\$3,400.00	1	\$3,400.00	
38	INSTAR Lab	Aputure Light Storm LS C120D II LED Light Kit	\$800.00	6	\$4,800.00	
39	Tao Cottage	Sennheiser EW 512P G4 Lavalier Microphone	\$960.00	2	\$1,920.00	
40	INSTAR Lab	Neumann TLM 170 R Multi-Pattern Large-Diaphragm Mic	\$3,200.00	1	\$3,200.00	
41	Tao Cottage	Neumann TLM 170 R Multi-Pattern Large-Diaphragm Mic	\$3,200.00	2	\$6,400.00	
42	Tao Cottage	Kopul Studio Elite 4000 Series XLR M to XLR F Mic Cable	\$20.00	2	\$40.00	
43	INSTAR Lab	Kopul Studio Elite 4000 Series XLR M to XLR F Mic Cable	\$20.00	1	\$20.00	
44	Tao Cottage	Focusrite Scarlett 18i8 18x8 USB Audio Interface	\$400.00	2	\$800.00	
43	INSTAR Lab	Focusrite Scarlett 18i8 18x8 USB Audio Interface	\$400.00	1	\$400.00	
44	INSTAR Lab	Robus RC-5570 Vantage Series 3 Carbon Fiber Tripod	\$550.00	2	\$1,100.00	
45	Tao Cottage	Robus RC-5570 Vantage Series 3 Carbon Fiber Tripod	\$550.00	3	\$1,650.00	
44	INSTAR Lab	Coronado SolarMax III 90mm f/8.8 Telescope	\$7,600.00	1	\$7,600.00	
45	All Sites - 1 Per Site	Reolink 4K PoE Security Camera System RLK8-800B4	\$600.00	5	\$3,000.00	

	Totals	\$404,930	\$130,780
A	Overall DLT Project Budget (Sum of Total Grant/Cash column and In-Kind Match column)		\$535,710
B	Less Proposed Cash Match (as documented on Matching Worksheet)		\$ -
C	Less Proposed In-Kind Match (From Total of In-Kind Match Column)		\$130,780
D	DLT Grant Request (A-B-C)		\$404,930
		Grant to Match % check (15% minimum req'd)	32.30%

F. FINANCIAL INFORMATION AND SUSTAINABILITY

The Tao Learning Institute is a Microsoft Authorized Education Partner whose leaders have over 25 years in the EduTech industry. They have built telecommunication systems for enterprise, non-profit, and education sectors with solutions for Universities, K-12 Schools, and medical facilities.

Led by Matthew Hackney, a local resident of the Appalachia Region who has acted as CTO and Solution Architect for multiple Silicon Valley based enterprises and who has built MSME education solutions internationally with recognition for his contributions to the Edutech space.

We have multiple Curiosity Coaches on staff who are Microsoft Certified Educators in various fields who will provide instruction to the new Curiosity Coaches needed for this initiative.



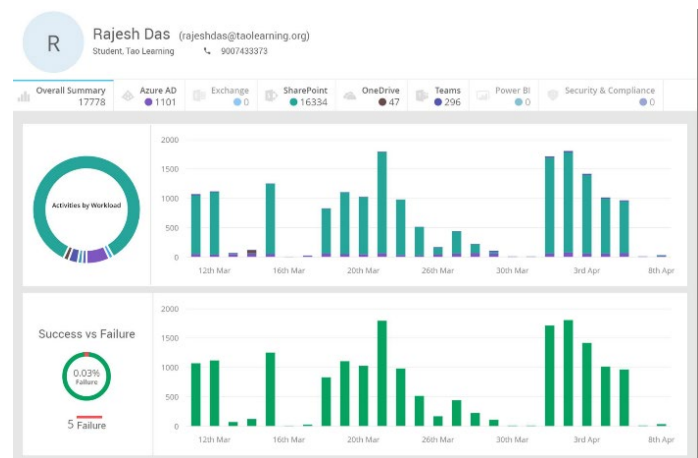
Each site will have Curiosity Coaches trained at our Hub Site and online through the Microsoft Learning Academy. Microsoft Certified Educator (MCE) certification validates that educators have the global educator technology literacy competencies needed to provide a rich, custom learning experience for students. MCE certification will exemplify our Curiosity Coaches. The additional Microsoft Innovative Educator (MIE) badge will be acquired by assistants and student apprentices.

Each site will be capable of signing students up directly for Focus Passes. These passes will be purchased online and the initial registering End-User Site will be given credit for acquiring a new student, though funds will be maintained by the parent organization.

Funds will be distributed back to each location on a quarterly basis as determined by the number of Focus Passes attained on-site. Sites will receive a percentage of the membership fees for continued operations and will receive support and continued training from the Hub Site and Tao Learning staff.

Continuity for students will be sustained by monitoring the Curiosity Scores of each participant which analyzes various metadata on usage of our platform and coursework.

Curiosity Coaches will also be monitored in this system and will receive continual training in partnership with TSSC by Toyota, our own Tao Learning Institution, Microsoft Learning Academy, Grow with Google, and other partners to ensure continuity in all locations.



Student Curiosity Score Dashboard

BUDGET & RESOURCES

While relying on SWARM Intelligence System™, we have accrued a large network of dozens of volunteers with industry experience who have been consistently giving their time to increase literacy and participation in our programs. Each End-User Site chosen is also already well-funded and in operation for over a decade each. Thus, the human resources and buildings are already in place for each location.

Once launched, the staff at each location will undergo new training with Microsoft, Toyota, and Tao Learning to upskill the educators. Even so, these educators already have ample experience in women empowerment, Micro-Business Entrepreneurship, motivating rural communities to actively participate in alternative learning, and acting as role models in Career Advancement and Job Seeking.

The sites are already operable and have education or telemedicine services already provided. The broadband facility is on a lease and this acquisition provided by the grant will free up lease funds that will be redistributed back to operations.

Membership will be set with paid fees for Focus Passes. These fees will create a sustainable fiscal strategy where the Broadband facility can continue to create content using the membership fees and the educators at each site will gain salary funding allocated from the membership fees as well.

New industry partners will be solicited to endorse the program whereby we incorporate alternative learning for their factories and business sectors. The information taught to students will be general, though each industry partner will be encouraged to cover an additional annual donation to sustain coursework creation, equipment maintenance, and sustainable teacher salaries.

We will discuss this program with ARC, NSF, and other government bodies who are interested in channeling additional coursework through it and whose grant funding can align with the same mission.

The combination of industry partner endorsements, future grants, along with membership fees paid by community members will create a long-term solution to this initiative.

G. STATEMENT OF EXPERIENCE

The Tao Learning Institute has built multiple EduTech solutions and Telemedicine solutions in rural environments for over 25 years. We will share a few of our programs below:

Academic Excellence with Pedadida

Designed over a 12-year period for the growing Fine Arts Academy of TheMOV, we grew this platform to be robust, dynamic, and user friendly. Handling over 3 million users during peak performance, the platform has shown its strength in an enterprise environment.

We continued to grow the platform and develop contracts with Education partners who were moving their classrooms into the digital sector. We white-labeled the entire platform on a LAMP Server and switched to an MIT License for full collaboration with the open-source community.

We became known in the Education Development community and many of our staff blossomed into their own IT firms to service the LMS, MOOC, and Cyber Security of

Education. Our family of developers is now a network of partners in the IT Education field that is ever evolving, yet maintaining our close ties and integrity on program performance.

Airikai Sacred Arts Academy



In 2014, we built a 30-acre campus in the rainforest of Costa Rica and connected it with multiple local institutes. We ran fiber optics over multiple kilometers to create an educational intranet between a dozen sites.

Students traveled from all over the world to come and learn Permaculture, Design, Mental Health, Community Leadership, and Microbusiness.

We had over 100 students living on-site and working with licensed Mental Health professionals, licensed educators from America and Canada, and Health Coaches with a proven record of building businesses and helping clients.

Our graduates gained careers in Silicon Valley, became political leaders upon their return to their home countries, and went on to create their own permaculture programs.

Bjorklund Ranch & Outdoor Craftsman School

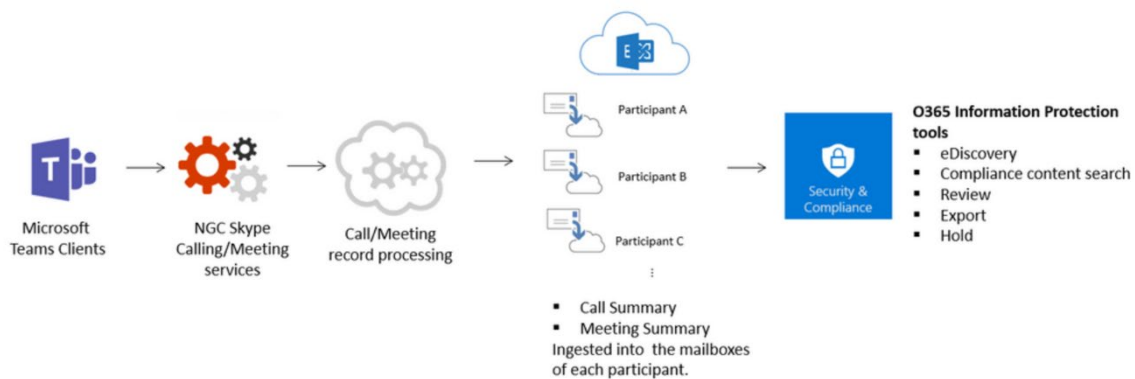
From 2005-2012 the Tao Learning Institute's founders consulted and incubated multiple verticals inside Bjorklund Ranch in the Santa Ynez mountains where we helped salvage invasive Eucalyptus to create an outdoor craftsman school & repurpose the wood to furniture and flooring.

This business is still operable and thriving while using sustainable practices and providing ongoing training in relevant agribusiness to the local community.



H. TELECOMMUNICATIONS SYSTEM PLAN

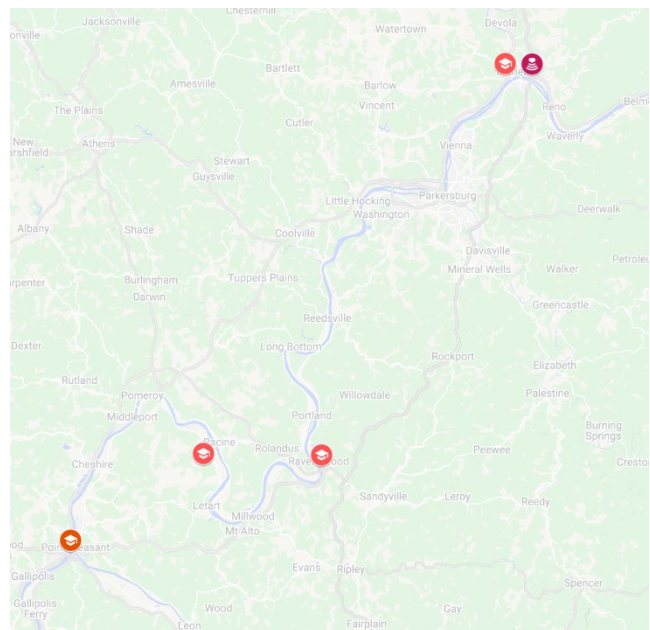
1. **Network Equipment Capabilities:** The broadband facility will be outfitted with Cisco Catalyst 9200 Network Switches perfect for Creative Studios and small campuses. We chose this option so students can stream video and utilize SharePoint both internally and in the cloud with a stacking bandwidth of 160Gbs.
 - a. These will be outfitted at the hub-site and all end-user sites along with Cat7 cabling for future-proofed design.
 - b. The 48 ports allow us to connect plenty of workstations as our facilities grow and the PoE allows our Security Camera system to plugin with ease using only Cat7 cables.
 - c. Each location will also be equipped with NETGEAR Nighthawk AX12 12-Stream Wifi 6 Routers for high bandwidth connectivity in a rural environment for up to 12 streaming devices at a time.
 - d. The networking backbone will be Cloud serviced using a variety of Azure DevOps solutions to meet dynamic needs of the educational experience.
 - e. A Reolink 4K PoE Security Camera System RLK8-800B4 security system will be connected to the PoE router and setup around the parameter of each site.
2. **Student Equipment Usage:** We are Microsoft Authorized Education Partners and will utilize Azure Active Directory (AAD) as the education backbone. Users will access Facebook Social Learning for initial testing and onboarding so we can handle a large number of users without the need to create accounts. Those purchasing Focus Passes will gain AAD accounts and given access to the Microsoft 365 ecosystem to be used on our Microsoft Surface Pro 7 + Pen equipment or to be used with a Bring-Your-Own-Device (BYOD) strategy.



- a. Communications will work through MS Teams meetings where we use Intune inside Office 365 to provide security and operations of distant learning, telemedicine, and communications. Meetings will be streamed with StreamLabs OBS, Twitch, and/or MS Streams while using Logitech Brio webcams for general users. Canon 5D Mk IV DSLRs for special education sessions.

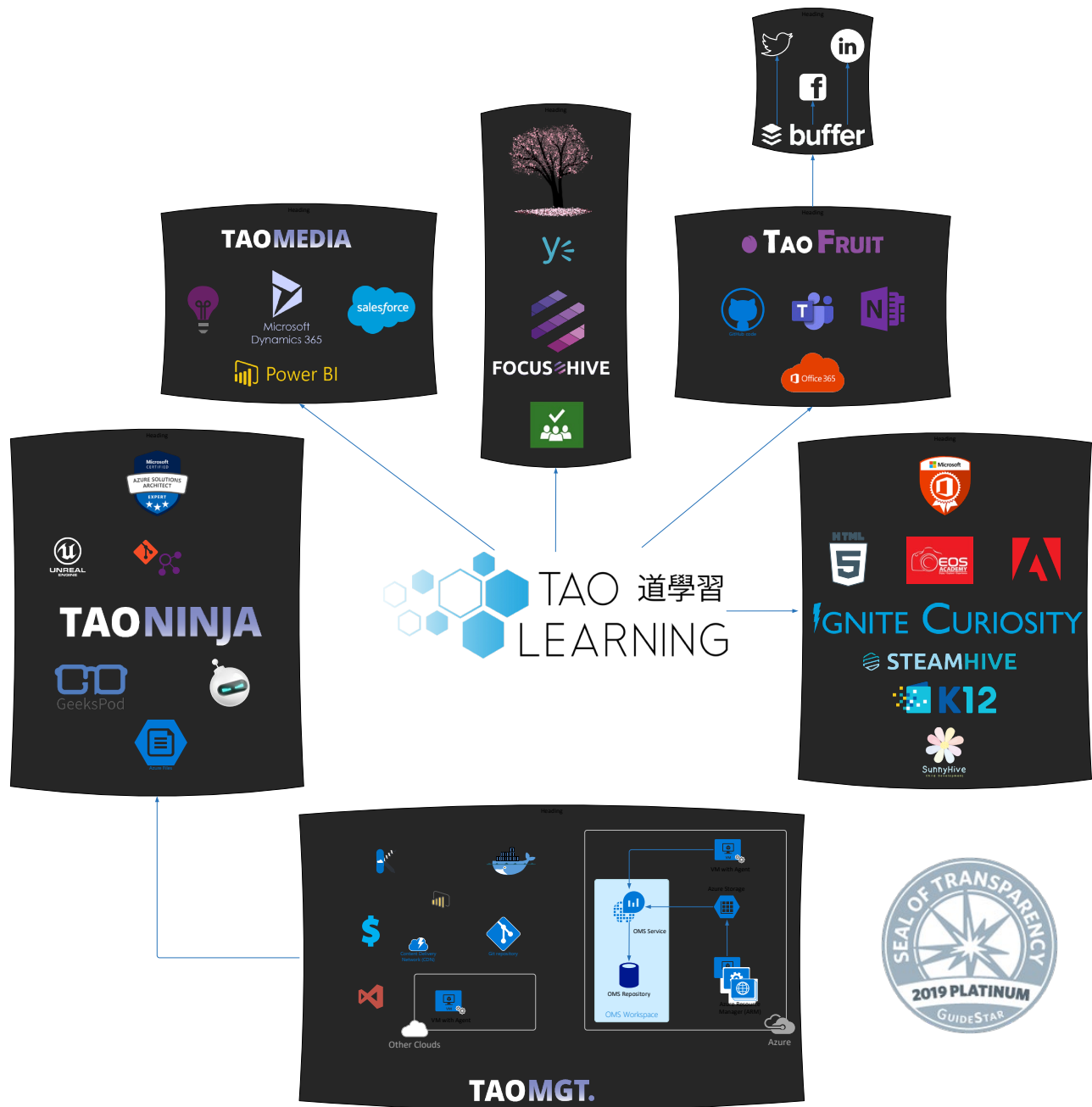
- b. Custom desktop servers using AMD processors and Nvidia Graphics cards designed by a vendor will provide access for educators to create content at our INSTAR Lab and Tao Cottage.
 - c. Students will use ViewSonic VX3211-4K-MHD 32 Inch 4K UHD Monitors at each location at their docking station with the Microsoft Surface Pro 7 + Pen.
 - d. Microsoft HoloLens will connect to Microsoft Surface Pro 7 + Pen for an immersive Mixed Reality learning experience. One HoloLens will be made available at each End-User site along with one for content creation at the Hub-Site.
 - e. A Coronado SolarMax III 90mm f/8.8 Telescope will be used at INSTAR Lab and any other location for astronomy events.
 - f. A combination of relationships with Suddenlink, CAS Cable, and Spectrum are established to service all locations.
 - i. Internally, the Cisco Catalyst 9200 Network Switches will provide intranet usage and connect to SharePoint files to reduce network usage.
 - ii. Externally, the fiber optic providers will connect End-User sites with the Hub-Site.
3. **Fiber Optic Providers:** We will use business-grade fiber-optic connections with the above available carriers. No consultation is necessary at this time as relationships have already been established that can handle the required throughput.
- a. After the program is started, we will reach out to various providers of telecommunications and ask for endorsement of this program and to expand its reach throughout the communities we serve in Appalachia.

4. **Map and Strategy:** The map here shows the geographical distance and locations of each program, depicting the Hub-Site in darker red at the upper-right of the map in Marietta, OH with a 70 mile distance spread between all sites.



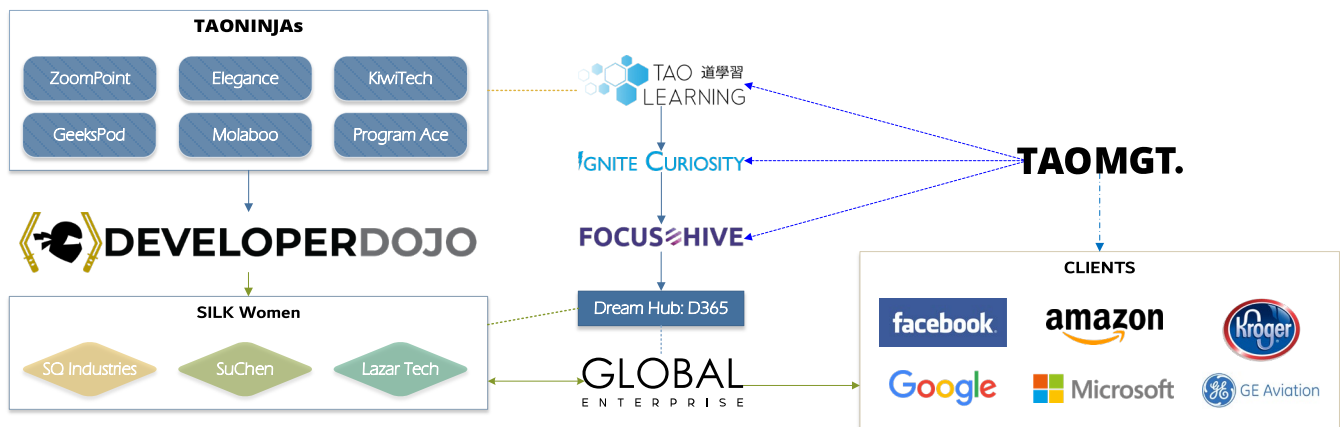
- a. The BB2C location in Marietta is quite popular and connected to thousands of students and will serve as an outreach to allow the program to gain popularity.
- b. The other locations are in higher need of skill training and will see our specialists in Marietta do site visits and conduct training to lift their technical skills and health.
- c. This overview map shows the various educational partners, programs, and delivery vehicles available for students to come into our organization and then immerse into experiential learning with a clear pathway to success.

- i. Focus Pass participants will start at 3-o'clock on this diagram in simple programs that ignite their curiosity and allow them to discover who they are and what they want in life.
- ii. Their journey takes them counter-clockwise around our various programs where they will gain greater STEAM literacy and exposure to industry tools and philosophy.
- iii. The final step is partnering with Fortune 100s who require high level developers, engineers, and applicants who have strong mental health and do not suffer from addictions or common problems found in Appalachia.



5. **Facilitator & Content Creation Overview:** The Hub-Site in Marietta will create content with various professionals using Adobe Creative Suite and a variety of equipment. It will duplicate these efforts with apprentices located at INSTAR Lab using other equipment. The content creator locations will be outfitted with the following equipment:
- a. Audio Production Kit at INSTAR Lab & Tao Cottage
 - i. Neumann TLM 170 R Multi-Pattern Large-Diaphragm Mic
 - ii. Kopul Studio Elite 4000 Series XLR M to XLR F Mic Cable
 - iii. Focusrite Scarlett 18i8 18x8 USB Audio Interface
 - iv. Sennheiser MKE600 Shotgun Microphone Kit
 - v. Sennheiser EW 512P G4 Lavalier Microphone
 - b. Tao Cottage Video Production Kit
 - i. Robus RC-5570 Vantage Series 3 Carbon Fiber Tripod
 - ii. Canon EOS-1D X Mark II DSLR Camera
 - iii. Film Lighting Kit
 - c. INSTAR Lab Video Production Kit
 - i. Aputure Light Storm LS C120D II LED Light Kit
 - ii. Canon EOS C500 Mark II
 - iii. Robus RC-5570 Vantage Series 3 Carbon Fiber Tripod
 - iv. K 5600 Lighting Joker-Bug 200-Watt HMI
 - v. Canon EF CN-E Cinema Prime 7-Lens Kit (Shared with all Sites)
 - vi. Coronado SolarMax III 90mm f/8.8 Telescope (for AstroPhotography)

The Curiosity Coaches are partnered with many top companies and will constantly update the standards of programming to adhere to industry needs. They will share this information back with the Tao Learning Institute and provide upgraded programming inside the Focus Hive.



Participants will work with facilitators, curiosity coaches, HR personnel, and many other industry leaders who pass through the SMILE Spaces™ looking for apprentices interested in experiential learning opportunities. We facilitate as much as possible on-site with students so they can gain exposure and relevant lifestyle habits they will find in the actual workforce.

DATA COLLECTION & STORAGE: THE CURIOSITY COMMUNITY

The Curiosity Community utilizes Azure AD in a decentralized Virtual Machine, hosted by Microsoft. This data is updated in real-time, anonymized, and then stored in our proprietary software for public consumption known as the Curiosity Score. A link to this is available on our main website:

<https://taolearning.org>

We collect names, locations, usage, software comprehension, and literacy all in this software.

DATA QUALITY ASSURANCE & SECURITY

We partner with Cyber Security professionals to analyze our methods, storage techniques, and to actively engage in penetration-testing periodically to keep our server and security standards optimized.

We utilize only Microsoft-Certified software in our data handling and rely on Microsoft Servers for all transferring and storage of data.

DATA ANALYSIS AND USE

The Curiosity Score will be used on an international scale to determine our effectiveness in the United Nation's mission to achieve Sustainable Development Goals: SDG4. We anonymize this data and provide it for public consumption so other educators and world leaders can understand who is attaining literacy in digital software.

I. COMPLIANCE WITH OTHER FEDERAL STATUTES

FY2020 DLT- Application Checklist

Section	Description	Schedule	Complete
A	Completed Standard Form 424 (Including Site Worksheet)		
B	Executive Summary of the Project B-1 Publicly Releasable Project Description		
C	Scoring Criteria Documentation C-1 Rurality C-2 Economic Need C-3 Special Consideration C-4 Need for Services and Benefits		
D	Matching Requirements		
E	Scope of Work 1 - Specific Activities to be performed 2 - Who will carry out activities 3 - Timeframes for accomplishing objectives 4 - Budget for all capital expenditures		
F	Financial Information and Sustainability		
G	Statement of Experience		
H	Telecommunications Systems Plan 1 - Capabilities & Description of Telecommunications Equipment 2 - Complete Listing of all Telecommunications Equipment. 3 - Description of the consultations with telecommunications carriers. 4 - A diagram or map of the proposed system overlaid with a geographic map of the service area		

	5- Sites (hub, hub/end-users, or end-users that will participate in the project and where equipment is located)		
I	Compliance with Other Federal Statutes and Regulations		
	1. Assurance Agreement	I-1	
	2. Certificate Regarding Flood Hazard Area Precautions	I-2	
	3. Applicant Certification Federal Collection Policies for Commercial Debt	I-3	
	4. Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 Certification	I-4	
	5. Certificate Regarding Architectural Barriers	I-5	
	6. Non-Duplication of Services Certificate	I-6	
J	Evidence Of Legal Existence and Authority to Contract with the Federal Government		
K	Environmental Impact and Historic Preservation Environmental Impact Survey Environmental Questionnaire		
L	Consultation with State Director		

By signing this checklist, you are certifying you understand by submitting the application you have enclosed the required document I-1. By signing this certification, you are agreeing to the language in schedules I-2, I-3, I-4, I-5, and I-6, as shown in the application guide. To the extent any certification requires a question to be answered, please address your answer as a narrative attachment to this checklist. (I-2 and I-3 have questions that need to be answered, please attach an explanation to this checklist as to which selections you are making). If you have any questions about your application, please contact RUS prior to submitting this application and certification.

Matthew Hackney President



Matthew Hackney (Apr 10, 2020)

04/10/2020

Print Name

Title

Signature

Date

SCHEDULE I-2 CERTIFICATE REGARDING FLOOD HAZARD AREA PRECAUTIONS

If the project is located in an area subject to flooding, flood insurance must be provided to the extent available and required under the National Flood Insurance Act of 1968, as amended by the Flood Disaster Protection Act of 1973, as amended (42 U.S.C. 4001 through 4128). If applicable, the insurance must cover, in addition to the buildings, any machinery, equipment, fixtures, and furnishings contained in the buildings. Rural Utilities Service will comply with

Executive Order

11988, Floodplain Management (3 CFR, 1977 Comp., p. 117), and 7 CFR 1970, of this chapter in considering the application for the project.

Please provide an explanation below to the following questions:

Is the project not located in a 100-year flood plain; and therefore, no Flood Insurance is required?

Or

Is the project is located in a 100-year flood plain? If yes, who is or will be providing the required insurance.

Fill in the explanation:

The majority of the project is not subject to flooding based on FEMA Flood Map Services.

INSTAR Lab, located at 1419 State Rt 7 N, Gallipolis OH IS subject to flooding. The Tao Learning Institute will provide the required insurance if this program is approved.

The Applicant hereby certifies, that, as a prospective recipient under the Distance Learning and Telemedicine Grant Program, it is in compliance, or will be in compliance during construction or installation of equipment and upon completion of the project, with the above referenced law.

SCHEDULE I-3 FEDERAL OBLIGATIONS CERTIFICATION ON DELINQUENT DEBT

IS THE APPLICANT DELINQUENT ON ANY FEDERAL DEBT?

Note: Example of debts include, but are not limited to, delinquent taxes, guaranteed or direct government loans (more than 31 days past due) and other administrative debts.

If Yes, provide explanatory information.

APPLICANT CERTIFICATION

FEDERAL COLLECTION POLICIES FOR COMMERCIAL DEBT

The Federal Government is authorized by law to take any or all of the following actions in the event that a borrower's loan payments become delinquent or the borrower defaults on its loan:

(1)

Report the borrower's delinquent account to a credit bureau; (2) Assess additional interest and penalty charges for the period of time that payment is not made; (3) Assess charges to cover additional administrative costs incurred by the Government to service the borrower's account;

(4)

Offset amounts owed to the borrower under other Federal programs; (5) Refer the borrower's debt to the Internal Revenue Service for offset against any amount owed to the borrower as an income tax refund; (6) Refer the borrower's account to a private collection agency to collect the amount due; and (7) Refer the borrower's account to the Department of Justice for litigation in the courts.

All of these actions can and will be used to recover any debts owed when it is determined to be in the interest of the Government to do so.

We attest that the Applicant is NOT delinquent on any Federal Debt.

J. EVIDENCE OF LEGAL EXISTENCE & AUTHORITY TO CONTRACT

**STATE OF OHIO
CERTIFICATE**

Ohio Secretary of State, Frank LaRose
4277630

It is hereby certified that the Secretary of State of Ohio has custody of the business records for
TAO LEARNING INSTITUTE

and, that said business records show the filing and recording of:

Document(s)

AMENDED/RESTATED ARTICLES

Effective Date: 01/11/2019

Document No(s):

201901003168

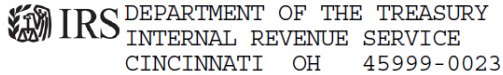


United States of America
State of Ohio
Office of the Secretary of State

Witness my hand and the seal of the
Secretary of State at Columbus, Ohio this
14th day of January, A.D. 2019.



Ohio Secretary of State



Date of this notice: 01-09-2019

Employer Identification Number:
83-3086300

Form: SS-4

Number of this notice: CP 575 E

TAO LEARNING INSTITUTE
125 FREDERICK ST
MARIETTA, OH 45750

For assistance you may call us at:
1-800-829-4933

IF YOU WRITE, ATTACH THE
STUB AT THE END OF THIS NOTICE.

WE ASSIGNED YOU AN EMPLOYER IDENTIFICATION NUMBER

Thank you for applying for an Employer Identification Number (EIN). We assigned you EIN 83-3086300. This EIN will identify you, your business accounts, tax returns, and documents, even if you have no employees. Please keep this notice in your permanent records.

When filing tax documents, payments, and related correspondence, it is very important that you use your EIN and complete name and address exactly as shown above. Any variation may cause a delay in processing, result in incorrect information in your account, or even cause you to be assigned more than one EIN. If the information is not correct as shown above, please make the correction using the attached tear-off stub and return it to us.

When you submitted your application for an EIN, you checked the box indicating you are a non-profit organization. Assigning an EIN does not grant tax-exempt status to non-profit organizations. Publication 557, Tax-Exempt Status for Your Organization, has details on the application process, as well as information on returns you may need to file. To apply for recognition of tax-exempt status under Internal Revenue Code Section 501(c)(3), organizations must complete a Form 1023-series application for recognition. All other entities should file Form 1024 if they want to request recognition under Section 501(a).

Nearly all organizations claiming tax-exempt status must file a Form 990-series annual information return (Form 990, 990-EZ, or 990-PF) or notice (Form 990-N) beginning with the year they legally form, even if they have not yet applied for or received recognition of tax-exempt status.

Unless a filing exception applies to you (search www.irs.gov for Annual Exempt Organization Return: Who Must File), you will lose your tax-exempt status if you fail to file a required return or notice for three consecutive years. We start calculating this three-year period from the tax year we assigned the EIN to you. If that first tax year isn't a full twelve months, you're still responsible for submitting a return for that year. If you didn't legally form in the same tax year in which you obtained your EIN, contact us at the phone number or address listed at the top of this letter.

For the most current information on your filing requirements and other important information, visit www.irs.gov/charities.



MATTHEW HACKNEY

Log Out

- MY SAM
- SEARCH RECORDS
- DATA ACCESS
- CHECK STATUS
- ABOUT
- HELP

ALERT: SAM.gov will be down for scheduled maintenance Saturday, 04/11/2020 from 8:00 AM to 2:00 PM

Entity Dashboard

Tao Learning Institute
 DUNS: 117004373 CAGE Code: 89GU5
 Status: Active
 Expiration Date: 01/02/2021
 Purpose of Registration: Federal Assistance Awards Only

125 Frederick St
 Marietta, OH, 45750-3407,
 UNITED STATES

- [Entity Overview](#)
- [Entity Registration](#)
 - [Core Data](#)
 - [Assertions](#)
 - [Reps & Certs](#)
 - [POCs](#)
- [Reports](#)
 - [Service Contract Report](#)
 - [BioPreferred Report](#)
- [Exclusions](#)
 - [Active Exclusions](#)
 - [Inactive Exclusions](#)
 - [Excluded Family Members](#)

BACK TO USER DASHBOARD

Entity Overview

Entity Registration Summary

DUNS: 117004373
 Name: Tao Learning Institute
 Business Type: Business or Organization
 Last Updated By: MATTHEW HACKNEY
 Registration Status: Active
 Activation Date: 01/03/2020
 Expiration Date: 01/02/2021

Exclusion Summary

Active Exclusion Records? No



IBM-P-20200327-1355
WWW3

- Search Records
- Data Access
- Check Status
- About
- Help
- Disclaimers
- Accessibility
- Privacy Policy
- FAPIIS.gov
- GSA.gov/IAE
- GSA.gov
- USA.gov

UNITED STATES OF AMERICA
STATE OF OHIO
OFFICE OF THE SECRETARY OF STATE

I, Frank LaRose, do hereby certify that I am the duly elected, qualified and present acting Secretary of State for the State of Ohio, and as such have custody of the records of Ohio and Foreign business entities; that said records show TAO LEARNING INSTITUTE, an Ohio not for profit corporation, Charter No. 4277630, having its principal location in Marietta, County of Washington, was incorporated on January 11, 2019 and is currently in GOOD STANDING upon the records of this office.



Witness my hand and the seal of the Secretary of State at Columbus, Ohio this 16th day of March, A.D. 2020.

A handwritten signature in blue ink that reads "Frank LaRose".

Ohio Secretary of State

Validation Number: 202007603910

K. ENVIRONMENTAL IMPACT AND HISTORIC PRESERVATION

1. Project Description and Location:

- a. We will add routers to existing structures and run Cat7 cabling internally within these structures.
- b. Lighting kits will be installed in the broadband facility known as Tao Cottage in the existing dance studio as well as at INSTAR Lab.

2. Land Use:

- a. No disturbance or changes will be made in accordance with land use.

3. Wetlands:

- a. No wetlands will be affected in this project.

4. Threatened and Endangered Species:

- a. No Threatened and Endangered Species will be affected in this project.

5. Floodplains:

- a. INSTAR Lab, located at 1419 State Rt 7 N, Gallipolis OH is in the 100-year flood plain.
 - i. The Tao Learning Institute will provide the required insurance if this program is approved.
 - ii. We are NOT doing construction at this location, so no FIRM Map is included.
- b. No other location has construction nor is included in a 100-year flood plain.

6. Coastal Areas:

- a. This project is not within the boundary of a coastal management area.

7. Brownfields:

- a. This project is not within a brownfield site.

L. CONSULTATION WITH USDA DIRECTOR

We sent correspondence to Mr. David Hall on 03/08/2020 and did not receive a reply, as referenced below.

Alternative Funding Opportunity Review for Tao Learning



Matthew Hackney

To david.hall5@usda.gov



3/8/2020

Hello David,

I'm the President of the Tao Learning Institute, an Ohio-Based nonprofit STEM Literacy consortium. We are currently applying for the Distant Learning and Telemedicine Grant and wanted to give you an executive summary to see if there are other funding opportunities for our programs. We did see the ReConnect Pilot Program and the Value Added Producer Grant have a few potential alignments, though we feel the DLT Grant matches our needs for this program the most. Please advise if you feel otherwise or if there are other programs USDA provides that are a better fit.

We are located in Washington County and desire to outfit our hub-site with better technology equipment to service a distant learning program for the community. We will have end-user sites in Gallia & Meigs Counties where students can access our STEM material as seen on our [Ignite Curiosity](#) website. We will cover exciting ways to bring passion to learning and business intelligence for children and those seeking career advancement.

We have experts in Quantum Computing, Artificial Intelligence, Game Development, and Machine Learning – all of which will be taught using these funds to rural areas. We look forward to expanding our outreach efforts with the help of the USDA and would appreciate any feedback you have before we submit our application to the DLT grant, which is due April 10th.



MATTHEW HACKNEY

PRESIDENT

EMAIL: MATTHEW@TAOLEARNING.ORG

USA: +1 929-229-2917 | UK: +44 20 3787 4564

HK: +852 3008 2393 | CHINA: +86 400 813 1207



TAO LEARNING INSTITUTE

M. SUPPLEMENTAL INFORMATION

Our websites in association with this project may be beneficial in explaining our program further. Please see the following:

Ignite Curiosity – www.ignitecuriosity.org

The Focus Hive – www.thefocushive.com