



**Delivering Innovative
Vocational Education
through Virtual
Reality Technology
(DIVE-VRT)**

Grant # H421F240044

USF UNIVERSITY OF
SOUTH FLORIDA

Kickoff Meeting Agenda



- Project Overview
 - Aims
 - Key Components
 - Innovation
 - Project Website
 - Project Advisory Committee (PAC)
 - External Partnerships
- Logic Model
- Work Plan
 - Timelines
 - Deliverables
 - Reporting
- Evaluation
- Team Roles and Responsibilities
 - Recurring Meetings
- Media/promotion

Project Overview

- Aim #1:
 - develop, implement, refine, evaluate, and disseminate an innovative, state-of-the-art model curriculum designed to facilitate timely, competitive integrated employment (CIE) outcomes, in high-demand careers, for transition-age youth (ages 16-21) and adults (ages 22+) with lifelong and/or acquired disabilities



Project Overview

- Aim #2:
 - create a sustainable, accessible, user-friendly website that contains project information, results, training, and resources to support project participants and stakeholders, and hosts the DIVE-VRT model curriculum scaling/replication process. This process incorporates both artificial intelligence (AI) technology (Tier 1) and human interaction (Tier 2) technical assistance and support options for replication with fidelity to the iteratively refined DIVE-VRT model while allowing for individualization based on unique participant/stakeholder and geographical/area needs.

Project Overview

- Deliver the DIVE-VRT curriculum to youth and adults with lifelong and/or acquired disabilities
- Participants receive education in a skilled trade, become certified, complete workforce readiness training, and are placed in an internship or apprenticeship (applied learning experience).
- Two new cohorts (youth and adult) begin every fall in August. The program is approximately one year in duration.



Project Overview

- DIVE-VRT offers industry certifications (CAPE, NATE CHP CHP-5, NATE Ready to Work, EPA 608, and OSHA 10). These certifications are highly regarded within trade industries and greatly enhance employability.
- Heating, Ventilation, and Air Conditioning (HVAC) certification offered for the first cohort.
- Job/Internship/Apprenticeship development and placement services are provided.
- Ongoing Education: offered to participant to allow them to keep honing their skills and staying up to date with industry trends and standards.



Project Overview

- Target Audience: Youth (16-21) and adults (18+ and out of school) with disabilities.
- The DIVE-VRT program will offer flexible schedules and partner with local schools to make the program accessible to high school students.
- Virtual Reality Integration: The program utilizes virtual reality technologies to provide training and prepare candidates for skilled trades. Targeted trades for this project include HVAC, Facilities Management, and other options (by demand); however, the project model has 4 core components that are adaptable for training in a diverse array of fields.

Key Components

- Component 1 – Virtual reality training in a skilled trade with certification exam preparation (15-18 weeks – varies by trade requirements; 1st/ fall semester).
- Component 2 – Workforce/soft skills training (10 weeks, 3 days/week, 2 hours/day). This training is crucial for career success as it helps individuals develop essential interpersonal and professional skills such as communication, teamwork, and problem-solving.



Key Components

- Component 3 – Apprenticeship (varies by skilled trade requirements; begins in the 2nd semester concurrently with workforce/soft skills training).
- Component 4 – Business and employer training, coaching, and technical assistance to prepare businesses to hire and retain employees with disabilities.



Innovation

- Topic Area #2 - Innovative Applications of Advanced Technology to Support Youth/Adults with Disabilities Leading to Competitive Integrated Employment (CIE)



- Virtual Reality (training)
- Artificial Intelligence (technical assistance)

Virtual Reality

- Virtual reality is experienced through sensory stimuli, such as sight, sound, and touch, generated by a computer, and can be interacted with in a seemingly real or physical way by the user.
- It typically involves wearing a head-mounted display that tracks the user's movements, creating a sense of being physically present in a virtual world.
- VR has the potential to “revolutionize the way education is delivered, making it more immersive, inclusive, and effective” (HP, 2024).



Virtual Reality

- Virtual reality learners are four times faster at learning than in a traditional classroom environment. They also tend to be more focused and retain information longer (Likens & Mower, 2022).
- Virtual reality technology can be utilized in a safe and controlled environment and VR systems are able to automatically collect data on learner's performance and provide immediate feedback (Chang et al., 2023).
- Virtual reality technology has high acceptability among users, above average retention rates in training, and minimal discomfort reported by learners.



Virtual Reality Training

- Facilitates collaborative learning experiences, allowing participants to work together on projects and interact with each other in virtual environments.
- Can be used to create personalized learning experiences tailored to individual participant needs, helping to improve engagement and learning outcomes.
- Can simulate real-world scenarios, allowing participants to apply theoretical knowledge to practical situations and develop critical thinking and problem-solving skills.



Artificial Intelligence (AI)

- AI is “any computer software that can independently mimic humans’ ability to observe the environment, orient toward a discriminative stimulus, make data-informed decisions, and act upon the decision” (Chang et al., 2023, p. 2).
- Using AI to respond to learner cues and responses enhances immediate feedback and the interactive learning experience.
- AI technology can utilize chat functions and/or natural language processing software to automatically respond to learners (Hassani et al., 2013). This allows for cost effective, scalable training while preserving individualization (HBRAS, 2020).



Artificial Intelligence (AI)

- AI allows reduced reliance on human trainers and technical assistance providers to provide flexible, online, on-demand training that aligns with learner's schedules and needs (Chang et al., 2023).
- Utilizing AI technology to provide Tier 1 technical assistance to trainees will enhance interactivity, promote immediate feedback to questions and TA needs, and promote sustainability of online, on-demand, web-based training options that have typically relied on regular human moderation.



Project Website



- Development of a project website to share project outcomes, training, and resources.
 - DIVE-VRT program information and resources
 - Replication manual and process
 - tiered technical assistance through a virtual, AI assistant (tier 1) and subject matter experts (tier 2) through the Florida Center for Inclusive Communities (FCIC) with which the Project Directors are affiliated.



Project Advisory Committee (PAC)

NAME	AGENCY/ AFFILIATION	TITLE/ ROLE	SPECIALIZATION
Wesley Bolin	Florida Vocational Rehabilitation	Area Coordinator	Vocational Rehabilitation
Nabile Amar	Hillsborough County Public School System	ESE Instructor Supervisor	Hillsborough/ Tampa Transition Services
Donna Philips	Department of Education: Project 10: Transition Education Network	Director	Florida Statewide Transition Services
Ryan Bird	College Student/ Job Seeker	Young Adult with a Lifelong Disability	Self-Advocate
Laura Kern	Florida Center for Inclusive Communities	Assistant Research Professor	Family Member; Advocacy
Laura Gross	Florida Gulf Coast Chapter ABC, Inc.	Vice President of Memberships	Formal Apprenticeships
Michael Stein	Millionaire	Director of Operations	HVAC Employer
Redwan Alqasemi	Center for Assistive, Rehabilitation & Robotics Technologies (CARRT)	Research Professor	Virtual Reality Expert
Jason Hair	USF Research Technology	Assistant Vice President of Information Technology (IT)	Artificial Intelligence
Eric Reed	Florida Alliance for Assistive Services and Technology	Executive Director	Assistive Technology
Victoria Gaitanis	CareerSource Florida	VP- Workforce Program Development	One Stop Service Centers

External Partnerships

- Department of Education
 - State and local Vocational Rehabilitation
 - Project TEN
- Hillsborough County Schools
- Self-advocates
- Families
- Employers
- CareerSource
- Center for Assistive, Rehabilitation & Robotics Technologies (CARRT)
- Florida Alliance for Assistive Services and Technology (FAAST)
- Apprenticeship Sites

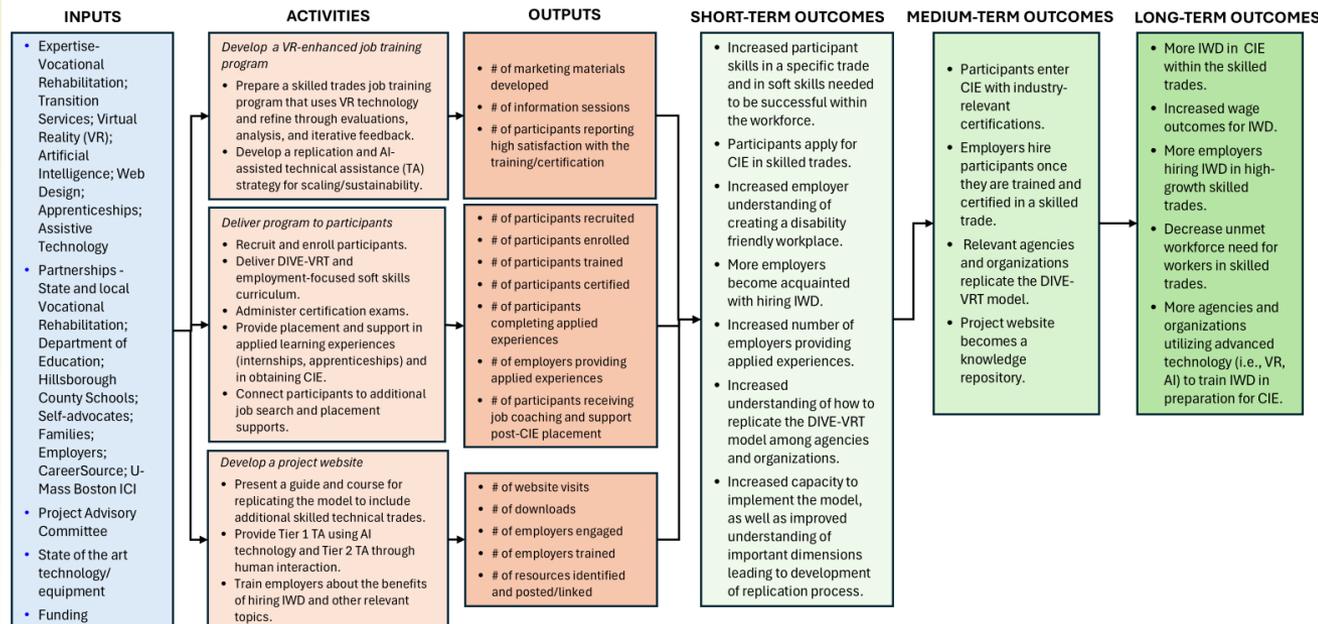


Logic Model

- Presents clear project goals, activities, outputs, and intended outcomes of the project, and lends to the comprehensive project evaluation.

H421F240044

University Of South Florida



Full size version of the logic model can be found on the project website

Year 1 Activities

(10/01/2024 – 09/30/2025)

- Development phase
 - IRB approval or exemption
 - Procurement of virtual reality equipment for training stations
 - Engage partners and advisory members
 - Develop protocol with standard operating procedures
 - Recruiting for the Phase 1 pilot.
 - All participants will have a lifetime and/or acquired disability, functional communication system, availability to attend orientation and training, reliable transportation, and basic computer skills. Some transportation options may be available through the grant (bus passes, etc.).
 - Orientation will include a virtual reality simulation to assess each participant's comfort level with the headset and virtual immersion experience.
 - Exclusion criteria includes blindness/visual impairment, susceptibility to seizures, and pregnancy.



Deliverables

Products:

1. an iteratively refined, replicable DIVE-VRT model curriculum
2. a replication guide and process for easy adoption of the DIVE-VRT model curriculum (protocol with standard operating procedures)
3. a project website linked to partner websites, including project materials, outcomes, trainings, and a model replication process
4. a tiered, web-based technical assistance (TA) platform using artificial intelligence (AI) technology.



Reporting

- Documentation is CRITICAL!
 - Internal Controls (approved work plan)
 - Operations – effectiveness and efficiency
 - Compliance – applicable laws and regulations
 - Reporting – reliable and accurate
- Reports (performance and budget)
 - Quarterly reporting is required
 - Mid Year Report (10/1-3/30)
 - Annual Report (10/1-9/30)
- Final report is due by **9/30/2029**
 - NO EXTENSIONS!
 - Any remaining funds will revert to RSA



Other Considerations

- No changes (personnel/subcontractors, activities, FTE/time on project, etc.) without prior approval from RSA Project Officer. “When in doubt, ASK!”
- All products/publications must include:
 - RSA statement (verbatim)
 - Grant award number (H421F240044)
 - 508 compliance

Project Evaluation

- Third party evaluation through U-Mass ICI
- RSA will also assign an evaluator/monitor
- Comprehensive evaluation plan to assess the program's impact, outcomes, and effectiveness
 1. extent to which products and services have met the goals for reaching its target population
 2. project results through measurable outcomes that align with the project logic model, ensure methods of evaluation are thorough, feasible, and appropriate, and align with the identified goals, objectives, and outcomes of the project
 3. effectiveness of project implementation strategies

Project Evaluation

- The project evaluation team will examine the effectiveness of the project and inform recommendations for revisions based on an iterative process with project stakeholders.
- Activities will promote continuous improvement of the program model and guide scaling and sustainability planning.
- Evaluation outcomes will inform how project staff will refine and enhance the program to prepare a comprehensive, easy-to-follow replication guide and process.



Project Evaluation

- 6 key evaluation activities:
 1. Pre-Post DIVE-VRT Impact Survey
 2. DIVE-VRT Participant Outcome Follow-Up Survey (6 and 12 months)
 3. DIVE-VRT Participant Satisfaction Surveys
 4. Qualitative Study of DIVE-VRT Model Implementation
 5. Evaluation of the artificial intelligence (AI) virtual assistant function of the project website with focus on its potential to facilitate outcomes that promote replicability, scalability, and sustainability of the DIVE-VRT program
 6. Evaluation of stakeholder (i.e.: employer) on-demand, web-based training options.

Pre-Post Impact Survey

- Designed to evaluate the *impact* of participation in the DIVE-VRT program on:
 1. development of job search skills
 2. development of soft skills
 3. ability to apply learned skills in an apprenticeship.
 - Activities include a pre-post survey to be filled out once before the DIVE-VRT curriculum and once after completion.
 - As part of the pre-test, participant demographic data will be collected (age, race/ethnicity, disability type, referral source, employment status, etc.).

Participant Outcomes Follow-Up Survey

- Evaluating the intended **outcomes** of the DIVE-VRT program including:
 1. placement in a CIE position within the skilled trade of interest including rate of pay, hours employed, benefits, job satisfaction etc.
 2. active engagement in a job search related to the skilled trade (can be either with or without VR supports) including number of interviews
 3. placement within CIE in another area outside of skilled trade.
- Activities to support this: 6-month and 12- month (post DIVE-VRT training) automated follow-up survey via email/ text with participants.

Participant Satisfaction Survey

- Each program semester, end-of-class evaluations will be administered by USF staff/trainers.
- Satisfaction measured by participant self-report of:
 1. their perceived level of engagement
 2. their ability to identify and report on newly learned skills
 3. their ability to demonstrate the application of newly learned skills in an apprenticeship
 4. report of curriculum content and instruction that was not easily understood
- Each satisfaction survey will include suggestions for improvement
- Activities include end-of-class survey administered electronically by semester to all DIVE-VRT participants across the life of the project
- Unique identifiers will be utilized to promote participant anonymity & candid responses.

Qualitative Study of Model Implementation

- Includes an in-depth evaluation of all components of the model demonstration including foundational concepts, process of implementation, barriers and strategies, and recommendations for improvement.
- Activities include virtual key informant interviews with the full range of stakeholders including project participants, trainers, vocational rehabilitation professionals, school-based staff, and employers offering apprenticeship opportunities.
- This will occur once in year 2 and again in year 4 to ensure iterative refinement and continuous improvement of the program model.



Project Website Evaluation

- The ICI evaluation team will review the project website and associated data (training evaluations, website/page visits, marketing and outreach metrics, feedback regarding user experience with replication/scaling resources and supports including the AI virtual assistant function) to evaluate outcomes related to replicability, scalability, and sustainability of the DIVE-VRT program.



Stakeholder Training Evaluation

- Data (i.e.: the number of services professionals, including but not limited to employers, who completed professional training through the project and reported the training is high in quality, relevant, and useful to their work) will be analyzed and findings will be included in evaluation reporting.

Project Teams, Roles, and Responsibilities

- Teams that make up DIVE-VRT:
 - Project Administrators
 - Launch USF
 - VRGLI
 - USF Innovative Education
 - USF Research Technology
 - U-Mass Institute for Community Inclusion



Project Administration

- Tammy Jorgensen Smith, Ph.D., CRC - Principal Investigator/Project Director
 - Lead administrative and fiscal activities; contribute to data collection and analysis, project reports and deliverables; dissemination and scaling/expansion activities; sustainability efforts.
- Christine Hugh, MS (Ph.D. student) – Co-PI and Associate Project Director
 - oversee day-to-day operations of the training program to ensure all program components are delivered with fidelity; provide on-site support to all DIVE-VRT staff members; serve as VRGLI's primary point of contact; assist with recruitment, reporting, replication planning.
- Budget Administration Team
- Division of Sponsored Research
- Institutional Review Board (IRB) oversight (minors and vulnerable populations)



Launch-USF

- DIVE-VRT is modeled after and expands the successful Launch program at USF-Tampa. Differential factors between the LAUNCH and DIVE-VRT programs include incorporating a skilled trades curriculum, apprenticeship placement, and virtual reality technology.
- Launch has been evaluated and refined over 15 years with successful replication and longitudinal outcomes data.
 - 95% graduation rate
 - Over 126 graduates
 - More than 50% of graduates have pursued post-secondary education
 - 70% have secured employment; over 33% working full-time
- Launch is a Florida Vocational Rehabilitation vendor which will facilitate appropriate referrals throughout the project and a method of sustaining the program after the end of the project.



Launch Team

- Christine Hugh – Launch Program Director/Team Lead
- Morgann Frazee – DIVE-VRT Project Manager
 - track the workplan to ensure timely completion of tasks; identify issues/concerns; facilitate open communication between all key personnel and subcontractors; primary point of contact for the school district; assist with recruiting, enrollment, consenting, and assessment of participants; support the lead business developer with job coaching.
- Shambria Campbell – Project Coordinator
 - assist Project Manager and Directors; coordinate team meetings, take meeting minutes, update project planning and implementation plans as needed.
- Scott Fontechia –Lead Business Developer/Job Coach
 - recruit local businesses to partner with DIVE-VRT; assist with the training and consultation of business partners; help secure internships and apprenticeships for participants; job development, placement, and support for participants
- Amy Gallaher - Launch Instructor –
 - train cohorts of participants in conjunction with VRGLI



Virtual Reality Galaxy Learning Institute (VRGLI)

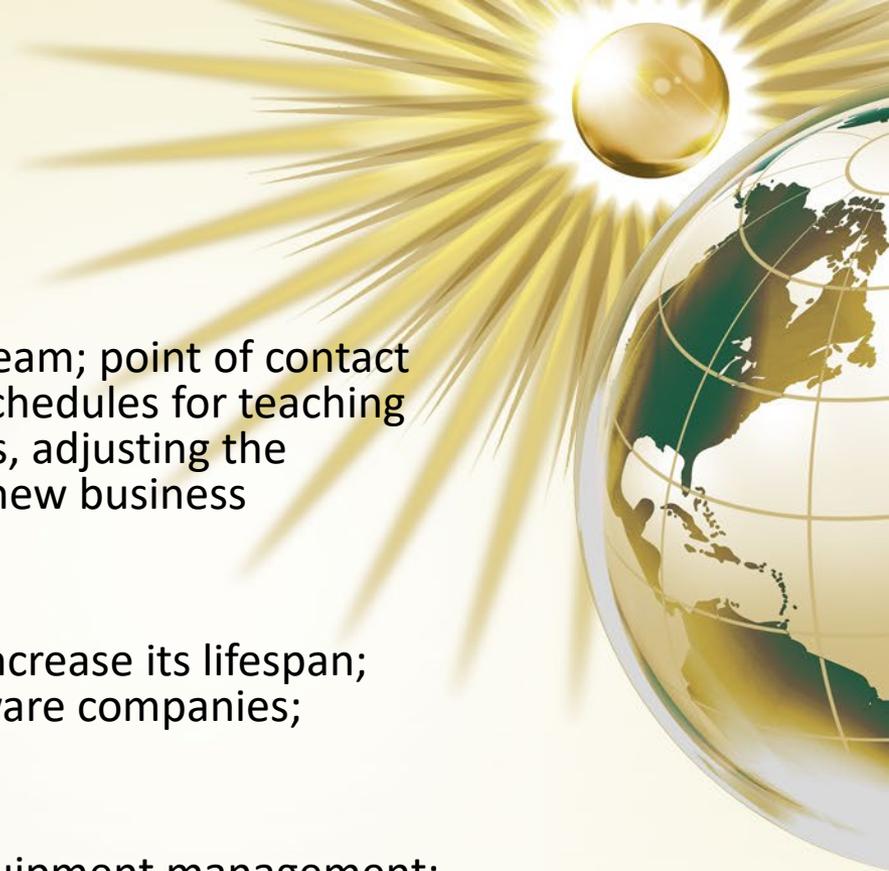
- VRGLI is a local non-profit organization.
- VRGLI's mission is to prepare youth and adults with disabilities for careers in skilled trades by leveraging virtual reality technologies.
- VRGLI's approach includes providing immersive experiences that can transport participants to different locations or time periods, making learning more engaging and memorable.
- VR simulations can be used to provide hands-on training in fields such as skilled trades, medicine, engineering, and aviation, allowing students to practice skills in a safe and controlled environment.



VRGLI Team*

- Larry Tartaglino – VRGLI Lead
 - oversee the daily operation of the VRGLI team; point of contact for USF; lead instructor; coordinate staff schedules for teaching and administering exams across all cohorts, adjusting the curriculum, providing TA, and developing new business partnerships
- Tony Denham – VRGLI Co-Lead
 - set up and maintain all VR equipment to increase its lifespan; manage the partnership with the VR software companies; provide teaching support for cohorts
- Joe Fratto – VRGLI Site Manager
 - manage the VRGLI location; assist with equipment management; develop new business relationships; support reporting efforts

*VRGLI team will be responsible for teaching all trade-related curricula to all cohorts, administering the certification exams, supporting participant retention in the program, adapting the curriculum as needed, managing the partnership with the software company, and maintaining the virtual reality equipment



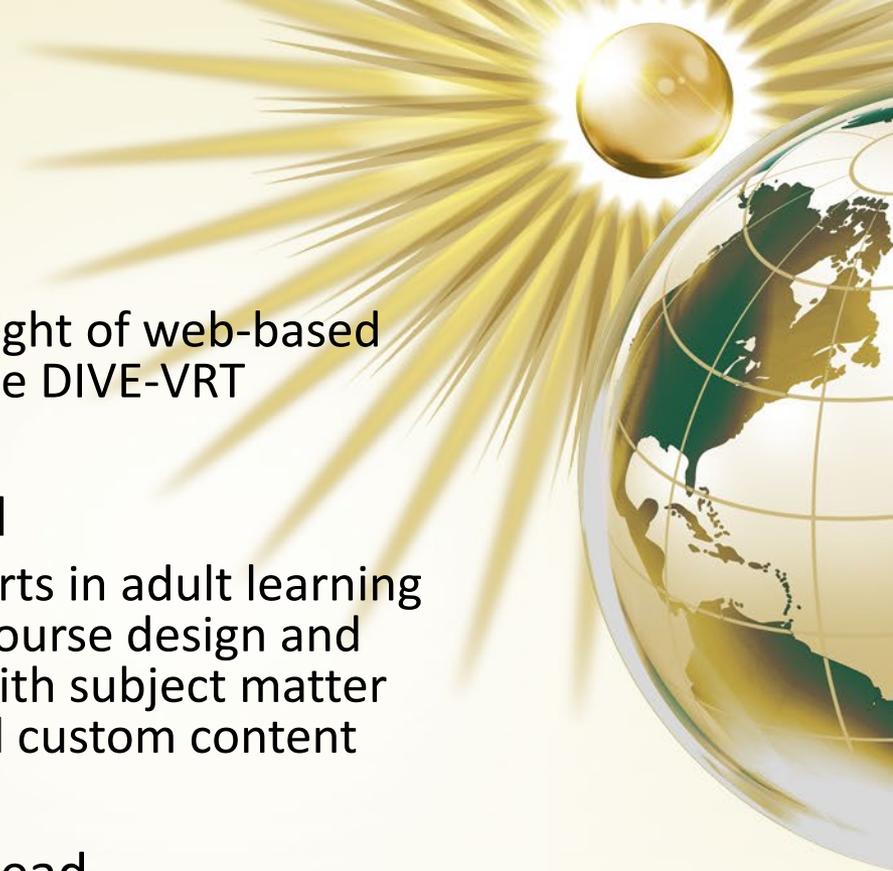
USF Innovative Education (InEd)

- The primary role of the InEd team is to scale the DIVE-VRT program nationally by developing training materials, digital assets, and a comprehensive AI driven support system for implementation.
- Deliverables include 1) comprehensive training course for national implementation, 2) digital assets for the public-facing website, 3) digital assets for customized AI virtual assistant throughout 5-year lifecycle, 4) employer training and support materials, and 5) marketing materials and PR strategy.



USF InEd Team

- Christine Brown – InEd Team Lead
 - provide strategic leadership and oversight of web-based training and design; assist team to scale DIVE-VRT nationally
- Christie Nicolas – Learning Design Lead
 - lead the Learning Design team of experts in adult learning theory, universal design for learning, course design and competency-based training; partner with subject matter experts to design training material and custom content development
- Desiree Henderson – Digital Learning Lead
 - day-to-day project management and coordinating with Learning Designers and Video Producers to create training and content to scale the DIVE-VRT program
- Jarod Brown – Creative Director (InEd Studios)
 - lead the video team to create engaging media for training and content integration
- Gary Granger - Producer and Logistics Lead



USF Research & Information Technology (RT/IT)

The USF RT/IT Team will:

- Develop Chatbots for interrogating website training material and the project website
- Develop an Interactive AI assistant to aid in implementation of the DIVE-VRT program across all project phases
- Develop a Chatbot for the "live" program site to answer questions on website and act as front-line (tier 1) technical support



USF Research and Information Technology (RT/IT) Team

- Jason Hair – RT/IT Lead
- Howard Kaplan – IT/AI Project Manager
 - management, design, development, and integration of artificial intelligence for tier 1 technical assistance through the project website

Discuss options for integrating AI into the virtual reality training modules for real-time feedback and encouragement.



U-mass ICI Evaluation Team

- Jaimie Timmons – Lead Evaluator
- Oliver Lyons – Impact and Outcome Surveys
- Esther Kamau- Interview, Data Collection and Analysis
- Ryan Wedeking – Support Staff
- MAC Team – Products and Outreach
- Grant Administrator - TBN



Additional Positions

- Graphic Artist (Dawn Khalil)
- FCIC Web Designer (Donna Bell)
- Graduate Assistants (2 part time positions)
 - Estefania Simon – Behavioral and Community Sciences (BCS) PhD program doctoral student
 - Halle Silver – Clinical Rehabilitation and Mental Health Counseling (CRMHC) master's student



Recurring Meetings

- Project Directors will meet monthly with the RSA Project Officer (PO)
- Project Directors meet weekly
- Full Project Team meets bi-weekly
- Team Leads meet monthly
- PAC meets quarterly (December, March, June, and September)
- Other meetings will be scheduled as needed/required (i.e.: RSA presentations/meetings, in-person events for team building/collaboration, project evaluation, etc.)

RSA Contractors

1. Westat – Compliance & Evaluation
2. American Institutes for Research (AIR)- Program Monitoring
3. National Clearinghouse of Rehabilitation Training Materials (NCRTM) – Products/Publications; Accessibility Support and Section 508 compliance
4. New Editions - Grant Technical Assistance Team



Media/Promotion

- ✓ USF Newsletter Announcement
 - USF will do another story next fall once participants are enrolled
- ✓ CBCS Communique Announcement
- Spectrum News story – for Disability Awareness Month (October)
- Recruitment
 - 30 second commercial to be developed by InEd
- Considerations:
 - Accessibility/508 compliance
 - Representation of diverse groups
 - Target audiences



Contact Information

- Tammy Jorgensen Smith (PI/Project Director) – smithtj@usf.edu
- Christine Hugh (Co-PI/Associate Project Director) – chugh@usf.edu
- Please visit our project website for a comprehensive list of team members and partners.



dive-vrt.org