

Department of the Navy SBIR/STTR Transition Program

DISTRIBUTION STATEMENT A. Approved for public release. Distribution is unlimited.
NAVAIR NAVAIR Public Release 2023-713. Distribution Statement A – “Approved for public release; distribution is unlimited.”

Topic # N211-010
Cloud Based Air Traffic Control Training System
Concepts Beyond, LLC

WHO

SYSCOM: NAVAIR

Sponsoring Program: PMA 205

Transition Target: U.S. Navy Air Traffic Control A School and U.S. Navy Air Traffic Control facilities

TPOC: (407) 380-4751
emily.c.anania.civ@us.navy.mil

Other Transition Opportunities: USAF Air Traffic Control Operator's course, Air Traffic Collegiate Training Initiative Schools (AT-CTI), FAA Academy, Navy/MC ATC Facilities (PMA 213), USAF, Army facilities, FAA facilities, and contract towers.

Notes: ACTER (Air traffic, Cloud-based TrainER) will have the ability to be tailored to individual facility and academy/school training needs.



Concepts Beyond 2023

WHAT

Operational Need and Improvement: The Navy Air Traffic Control School grapples with a pressing challenge, experiencing an attrition rate of approximately 30%, where nearly 3 out of every 10 students starting the Navy ATC School fail to complete their training successfully. Moreover, the normal career path of an air traffic controller involves transferring between different facilities. During these transfers, controllers must adapt to new procedures and processes specific to the new facility. This often requires relearning skills that were either not utilized or forgotten during training, leading to potential inefficiencies and a need for continuous skill reinforcement.

Specifications Required: To develop an innovative and cost-effective Cloud Based Air Traffic Control Training System that can provide ready relevant training and encourage student participation through gamification of learning arcade style activities, with integrated student and class metrics that can increase training efficiency can address that need. This capability will provide a level of training fidelity that the community has not experienced while reducing training time and cost.

Technology Developed: To overcome these obstacles, Concepts Beyond is developing an innovative solution - ACTER (Air traffic, Cloud-based TrainER). This cutting-edge gaming platform leverages modern technology to provide every Air Traffic Controller with easy access to a wide range of mini-games that complement the classroom, on the job training, and simulation time.

Warfighter Value: Navy Air Traffic Controllers stand to benefit significantly from incorporating ACTER into their training. With this platform at their fingertips, they can extend their learning beyond the traditional classroom and simulators. By dedicating time to playing games that incorporate Ready Relevant Learning (RRL), they will reinforce and expand their skills. They will increase their daily training time, leading to greater confidence, improved scores, and ultimately reducing attrition rates, as well as shortening training time in facilities.

WHEN

Contract Number: N68335-23-C-0152 **Ending on:** Dec 23, 2024

Milestone	Risk Level	Measure of Success	Ending TRL	Date
Working Prototype	Low	Ready for focus group testing	5	4th QTR FY24
Prototype End User Testing	Medium	Ready for revisions	6	2nd QTR FY25
Vetted Prototype	Medium	Revisions reviewed and approved	7	4th QTR FY25
Working Final Solution	Medium	Ready for integration	7	2nd QTR FY27
ATC A School Integration	Medium	Verification and validation	8	4th QTR FY27
Long-term Support	Low	Successful operational history	9	4th QTR FY28

HOW

Projected Business Model: Concepts Beyond is proud to offer a licensing agreement with the U.S. Navy, paving the way for subsequent engagements with Air Traffic Control-CTI schools, the U.S. Airforce, and the FAA. Additional uses may then extend to established prime contractors. Moreover, we are exploring opportunities for broader applications, to extend the reach of our gaming platform to a global clientele.

Company Objectives: At Concepts Beyond, our mission is to deliver the best products and services and exceed our customers' expectations. We have a culture of going "beyond", to not only satisfy our customers' needs, but to do it with innovative solutions that encompasses the many facets of a complex problem and add value. Going beyond also means to:

- Be forward thinking to forecast future trends, risks, and problems
- Collaborate to expand and enrich ideas
- Ask the critical questions to ensure the real problem is identified and the right solutions is found
- Be creative and innovative to find creative solutions that not only solves the real problems, but also improves other technical solutions, processes, or organizations at a higher level
- Foster sound, fresh ideas from different perspectives.

Potential Commercial Applications: In addition to addressing the educational needs of the U.S. Navy A school and air traffic control (ATC) facilities through Ready Relevant Learning (RRL) and gaming, Concepts Beyond is primed to expand its capabilities further into the domain of air traffic control training. We envision meticulously-crafted and tailored gaming activities to accommodate the intricacies of ATC operations within ATC facilities and schools worldwide. Concepts Beyond has identified diverse nuances within the ATC training domain that grapple with similar cognitive challenges, mirroring those encountered in our innovative gaming solutions that integrate RRL, powered by machine learning. Furthermore, this gaming platform's versatility extends beyond the realm of air traffic control, finding application in various other domains as well.

Contact: Alex Nguyen, Chief Executive Officer
anguyen@conceptsbeyond.com (202) 596-1007