

DESIGNING A MOBILE APP FOR AIR FORCE ROTC CADETS

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OVERVIEW

C2O, "Cadet to Officer," is a mobile app designed to track and measure Air Force Reserve Officer Training Corps (AFROTC) cadet performance. The objective is to aid military training officers and senior cadet leaders across the United States to ensure every cadet meets the requirements to commission into the U.S. Air Force (USAF) upon college graduation.

PERSPECTIVE

Approximately 20% of the USAF is comprised of officers and 80% are enlisted members. The U.S. military chain of command ranks officers above enlisted, considers officers as the official leaders, and designates them as the ultimate decision-makers on all policies and operations.

There are 145 AFROTC detachments in major universities across the U.S. Each detachment is responsible for training and commissioning anywhere from 10 to 300 cadets each year.

To commission into the USAF, cadets must meet the following criteria:

- Maintain a 2.0 overall GPA and good academic standing with the university
- **Meet national AFROTC physical fitness and training requirements or "objectives" set forth by USAF Air Education and Training Command (AETC)**
- Pass a written Air Force Officer Qualifying Test (AFOQT)
- Pass an extensive medical exam

Each detachment is "cadet run,": senior cadet leaders are responsible for ensuring each cadet in the detachment meets all the above commissioning requirements or "objectives" by creating and executing fitness sessions, leadership labs, and additional events each semester. They receive guidance from, and report to, a small team of military training officers, or "Cadre." Cadre "check-off" every cadets' ability to meet the requirements set forth by AETC.

While there are over 15 successful mobile applications for active duty, national guard, and reserve members, there is currently no nation-wide app specific to AFROTC cadets. Many AFROTC detachments have well-developed social media platforms to include Facebook, Twitter, Instagram, and Youtube, but only one detachment currently utilizes a mobile app specifically designed to keep their cadets informed of significant AFROTC events/dates, and for networking purposes. This app, while very innovative, is not for performance tracking.

PROBLEM

Bottom Line Up Front: Currently, there is no widely-utilized, publicly available, or standardized software or program to track and organize cadet performance.

Too many objectives, too little resources and manning. There are over fifty total objectives every cadet in any AFROTC detachment is required to meet to commission as an officer into the USAF. Many of these objectives are multi-faceted, and require significant performance tracking and review components over the course of each semester.

Inferior quality of USAF officers. AETC dictates clear AFROTC requirements, followed by every detachment. However, with no centralized approach to tracking these requirements, quality of cadets varies drastically across the country, ultimately producing large discrepancies in the quality of officers joining the USAF each year.

Senior cadet leaders are also full-time college students. Being a cadet is comparable to having a part-time job while taking on a full-course load every semester. In the final two years of ROTC, senior cadet leaders fill leadership and management roles, tasked with a multitude of responsibilities, including training and evaluating lower-level cadets. With no readily available system to track these responsibilities, cadets waste valuable time.

SOLUTION

C2O will be a mobile app offering three different user platforms to organize, track, measure, and communicate individual cadet performance in the areas of physical fitness, warrior knowledge, academic performance, and leadership training: one for lower-level cadet trainees ("C"), one for senior cadet leaders ("2"), and one for military training officers ("O").

EFFECT

Successful launch and application of C2O will be measured considering the following factors: number of total users, number of AFROTC detachment monthly subscription rates and numbers, retention, app reviews and rankings, and AFROTC detachment surveys. Specifically seeking an overall increase in cadet performance in knowledge, fitness, and leadership evaluations, which is possible to conduct at the end of each semester for every cadet in each detachment utilizing the app, and is accounted for the project "deliverables".

TARGET AUDIENCE

Client: C2O will be created for, and marketed to, AETC for mass availability at every AFROTC detachment in the U.S.

Audience: C2O will be utilized by three primary user types:

Military Training Officers or "Cadre". Air Force detachment commanders and their teams of officers tasked with managing AFROTC detachments to produce quality officers for the USAF. Primary duties include ensuring every cadet in the ROTC program meets the requirements for entering active duty, mentoring and offering leadership opportunities, and encouraging professional relationships within the detachment as well as the larger university campus community. These officers are anywhere from 22 to 45 years old, possessing varying levels of comfort using technology and mobile applications.

Senior Cadet Leaders - Professional Officer Course (POC). AFROTC cadet leaders and full-time college students, primarily 19 to 22 years old, possessing advanced knowledge of and comfort in using technology and mobile applications. POC spend approximately 10-20 hours/week on ROTC-related planning, organization, and execution of events for both POC and GMC. POC report to Cadre.

Lower-level Cadet Trainees - General Military Course (GMC). AFROTC cadet trainees and full-time college students, primarily 17 - 19 years old, possessing advanced knowledge of and comfort in using technology and mobile applications. GMC spend approximately 5-10 hours/week on ROTC-related training and leadership events.

TENTATIVE TIMELINE & DELIVERABLES

PHASES/TIME	FOCI	DELIVERABLES
Phase I: Concept One month	Exploration <ul style="list-style-type: none"> - Understanding the problem, strengths, limitations - Establishing Department of Defense (DoD) and AETC leadership points of contact - Project management and planning 	Project Outline and Timetable Brief DoD & AETC Initial Brief
Phase I: Concept Two months	Research & Analysis <ul style="list-style-type: none"> - Field interviews and surveys - Identify necessary key functionalities and features/translate technical specs into functioning app - Design research - Data analysis - Task analysis and planning 	Log of User Stories Initial Wireframes Style Guide, potential app icon & images DoD & AETC formal update
Phase II: Prototyping Three months	Design & Development <ul style="list-style-type: none"> - Ideations for AFROTC - UI design - Initiate “mock” ideations for Army and Navy ROTC potential apps* - Maintenance & support functions Marketing <ul style="list-style-type: none"> - Initiate sales training for app functionality - Design concentrated marketing plan, contract, and budget proposal for DoD 	Finalized Wireframes UI Designs and Iterations Running Codes (for Andriod, iOS, C#, and Mobile Site) “Read Me’ files Bugs & Issues Documentation Final app icon & images Formal Marketing Plan DoD & AETC formal update
Phase III: Testing Two months	Evaluate & Refine <ul style="list-style-type: none"> - Quality analysis (QA) testing - Usability testing - Design “fixes” or upgrades Marketing <ul style="list-style-type: none"> - Build user application training for consumers 	Fixed Wireframes (if nec.) Usability Testing Results Bugs & Issues Documentation User Application Manual
Phase IV: Deployment Three months	Testing <ul style="list-style-type: none"> - User testing/“mock” trial - Finalize design/refine and modify if necessary 	Design Fixes Documentation Mock Trial Results & Analysis
Phase V: Release One month	Delivery <ul style="list-style-type: none"> - Demonstration Marketing <ul style="list-style-type: none"> - Final presentation 	Final Presentation & Documentation Private Certs & Credentials Success Measurement Policy

COMPETITORS

At this time, there are no other applications or programs seeking to perform objectives specific to AFROTC organization and cadet performance tracking. However, it is possible other companies with foci in designing applications for organization or scheduling purposes may attempt to develop a similar app in the future.

BUDGET

At this time, a budget has yet to be determined. The typical cost to develop a quality, complex user authentication/login mobile application with a respective mobile site, baseline messaging and social networking features over the course of 12 to 14 months is approximately \$100,000 - \$300,000. Factors determining app development cost for the C2O project include number and complexity of features, number of platforms (iOS, Android, web), and design complexity (high).

The National Defense Budget allocated over \$100 billion for its research, development, test, and evaluation fund for 2020, the category under which technological developments such as new applications may fall under. The budget allocated by AETC for AFROTC cadet training is publicly unavailable information. The amount of funding allocated specifically toward military mobile apps and other softwares are also publicly unavailable.

KEY STAKEHOLDERS & DECISION-MAKERS

All products, applications, and funding allocated to the training and development of AFROTC cadets would fall under AETC, specifically Air University's, purview. The key stakeholders and decision-makers for AFROTC cadet training and funding required to sign-off on a potential new training initiative would communicate with the project team through their team's representative, Neal Harris.

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