GO/NO-GO PROCESS STANDARDIZATION ACROSS AMC'S C-17 FLEET

Graduate Research Paper

Kevin W. Brooks, Major, USAF

AFIT-ENS-MS-21-J-037

DEPARTMENT OF THE AIR FORCE
AIR UNIVERSITY

AIR FORCE INSTITUTE OF TECHNOLOGY

Wright-Patterson Air Force Base, Ohio

AFIT-ENS-MS-21-J-037

GO/NO-GO PROCESS STANDARDIZATION ACROSS AMC'S C-17 FLEET

Graduate Research Paper

Presented to the Faculty

Department of Operational Sciences

Graduate School of Engineering and Management

Air Force Institute of Technology

Air University

Air Education and Training Command

In Partial Fulfillment of the Requirements for the

Degree of Master of Science in Operations Management

Kevin W. Brooks, BA, MBA, MS

Major, USAF

June 2021

AFIT-ENS-MS-21-J-037

GO/NO-GO PROCESS STANDARDIZATION ACROSS AMC'S C-17 FLEET

Kevin W. Brooks, BA, MBA, MS

Major, USAF

Committee Membership:

Jason R. Anderson

Lt Col, Ph.D.

Chair

Abstract

The increasing world population, modernization, and globalization continue to increase the strain on the global transportation resources. Both infrastructure, vehicles, and personnel continue to operate at higher rates. It is imperative to ensure those operating vehicles that are massive in scale are qualified and capable of carrying out their critical role in transportation activities with an enormous impact on the global economy to meet the demands of international logistics.

This research, in particular, focuses on the pre-mission currency and qualification verification of the United States Air Force's C-17 Globemaster III aircrew. By conducting a case study on the current processes in place by six C-17 units and codifying and analyzing commonalities and differences across these units to determine the efficiencies and wasted efforts across Air Mobility Command's strategic logistic assets. This study uncovers the need for standardization in the pre-mission aircrew qualification procedures based on process improvement principles.

For my wife and children, who have provided me with continual and unwavering support.

Acknowledgments

I want to express my sincere appreciation to my research advisor, Lt Col Jason Anderson, for his guidance and support throughout this research project. His direction and influence enabled me to thoroughly dissect the complex aspects of the problem and shape this paper appropriately.

I am also immensely thankful to the Standardization and Evaluations professionals across the Air Mobility Command enterprise. Without their cooperation, the collection and analysis of critical process documentation would not have been possible.

Kevin W. Brooks

Table of Contents

List of Figures

List of Tables

GO/NO-GO PROCESS STANDARDIZATION ACROSS AMC'S C-17 FLEET

I. Introduction

The effects of ever-increasing globalization and population growth undeniably increase the strain on the logistics networks worldwide. These factors, combined with urbanization increases in developing nations, add to the demand for transportation sources (Ivanova, 2014). This increasing demand will increase demand for operators of all modes of transportation to keep up with the flow of goods, even as transport infrastructure is approaching capacity levels globally(Müller et al., 2012). As the demand for logistics operators increases and the capacity of infrastructure decreases, it is ever-important that we ensure the operators are qualified to safely employ their modes of transportation in increasingly congested sea lanes, roads, rails, and airspace.

All forms of commercial transportation require additional licenses or credentials to operate commercial vehicles. Truck drivers, for example, are required to obtain a Commercial Driver's License (CDL), which requires them to complete specialized training both in a classroom setting and hands-on driving experience. Similarly, to pilot a commercial ship, Merchant Mariners must have a mix of practical experience and classroom training before taking the licensure examination for a First-Classpilot's license. Pilots of aircraft also have specialized requirements, both in the civilian industry and within the military. Along with licensure requirements, there are ongoing training and currency requirements to ensure our transportation operators can perform their jobs. The impact of unqualified personnel operating large vehicles could result in delay or damage of equipment and cargo or even the loss of life for the crew and general populous. Each

industry is responsible for installing checks and balances to ensure all licensure and requisite events are compliant.

Currently, the C-17 community in Air Mobility Command (AMC) does not have a standardized aircrew pre-mission qualification and currency verification or "Go/No-G" process. There are several tools that a unit's scheduling, Squadron Aircrew Resource Management (SARM), Training (DOT), Standardization and Evaluation (CCV or DOV) sections. Ultimately, the Operations Officer (DO) or other Flight Authorization Authenticating Official (FAAO) must review to verify that all aircrew requirements are complete.

Due to the lack of interoperability of these systems, many units resort to locally generated checklists to ensure all required items are complete. These checklists help determine if an aircrew member is qualified for the proposed mission or training event. Additionally, they determine the need for supervision by an instructor certified in that crew position. Furthermore, local bases host the databases that track currency and qualification events. Lack of database visibility across bases frustrates the Go/No-Go process when reassigning an aircrew member through a Permanent Change of Station (PCS), Permanent Change of Assignment (PCA), or scheduled with another unit as part of an inter-fly agreement. Codifying standardized mission generation procedures could increase the efficiency of scheduling and guarantee aircrews are fully qualified and current to execute the mission.

This research aims to identify C-17 community best practices for ensuring pre-mission currency and qualification events are complied with before mission execution. Some limitations exist concerning access to critical systems utilized throughout the

process. For example, permissions limit access to Go/No-Go tracking databases, reducing the ability to analyze their effectiveness. These databases include the Aviation Resource Management System (ARMS), as well as the Individual Medical Readiness (IMR) system, and Training Management System (TMS). ARMS is the current record system for tracking aircrew training and currency requirements. Likewise, IMR is the system that displays the medical readiness of all airmen, including Physical Health Assessments (PHA) and immunization records. Finally, TMS is the contracted system in which aircrew members complete their Computer-Based Training (CBT), and scheduling and feedback for simulator events are stored. Additionally, the data systems and permissions that connect each unique software system are beyond the scope of this research.

II. Literature Review

2.1 General

For this paper, a Go/No-Go process reviews the mandatory ground training requirements, flying training requirements, and medical readiness requirements before participating in flight activities. In a typical C-17 unit, many offices manage the information stored in different databases that contribute to an aircrew member's overall readiness and legality to perform flight duties. Although the process is (informally) called the Go/No-Go process, it also identifies technically legal members to perform flight duties. However, they may not perform their assigned duty positions full spectrum of capabilities. Additionally, they may be allowed to fly as part of a re-qualification program even though they are not currently qualified to perform flight duties. Whether the mission is a local trainer or HHQ tasked mission, it is incumbent on the unit schedulers, SARM personnel, FAAOs, and Operations Officers to validate that the aircrew assigned to the mission is legal to fly.

This scheduling problem is not unique to the C-17 or the USAF and can be a very lengthy and cumbersome process (Ünal & Başçiftçi, 2020). Aircrew availability and training requirements are only two of the variables considered when formulating the flying schedule for a C-17 unit. Aircraft availability, weather, scheduled and unscheduled maintenance, range/airspace available are just a few of the possible obstacles for a scheduler to overcome (Nguyen, 2002). Schedulers must also ensure aircrew have accomplished required training events when formulating the flying schedule. Some of

these events are centrally scheduled classes, and others require individual appointments and training resources.

2.2 Go/No-Go Guidance

Aviation requirements for airmen certified to perform flight duties in the United States, outside of the USAF, are governed by the Federal Aviation Administration (FAA) and documented in the Federal Aviation Regulations (FAR). Specifically, part 61 of the FAR describes in detail the requirements for issuing certificates (licenses), as well as the responsibilities, privileges, and limitations associated with said certificates. Additionally, Part 61 outlines the medical requirements that an airman must meet and document to exercise their privileges, continuing training, and recent flight experience.

The aviation requirements within the USAF are more complicated than those as directed by the FAA. In contrast to the criteria outlined in the FAA, the requirements for the USAF not only to ensure essential medical readiness and recency of flight events but to encompass every aspect of combat mission employment that an airman is capable of performing. Multiple, dispersed regulations organized into functional areas provide the guidance and requirements for USAF airmen to gain, maintain, and document Go/No-Go events. These guiding regulations define the minimum ground training, flying training, and medical readiness items required for any given airman to certify that they are legal to fly.

2.3 Theory

Regardless of the industry, every organization's goal is to provide a good or service to the end-user or customer. Critical design of the operations and processes that create these goods and services is imperative to maximize efficiency. Another way to

view efficiency is to think about increasing productivity," getting more output out of a given set of inputs" (Schmenner, 2015). To understand an organization's operations, they should be broken down into each process or step along the way. An operation must be composed of processes that reduce cost and minimize errors to increase efficiency and customer satisfaction.

Designing an operation to meet these goals from its inception is the ideal solution. However, reviewing individual processes and entire procedures occasionally is required. Determining whether or not a process is meeting efficiency and cost goals and benchmarks is impossible in the absence of periodic "check-ups." These check-ups are increasingly important when an operation is affected by outside influences, such as changes in requirements, resources, or policies.

2.3.1 Scientific Management System (Taylorism)

One of the significant process improvement theories of the Industrial Revolution is the idea of Scientific Management or Taylorism. In 1911 Frederick Winslow Taylor penned the book *The Principles of Scientific Management*. The result of his studies was to maximize output. Taylor's Scientific Management optimizes production through the observation, measurement, analysis, and improvement of work methods, as well as economic incentives(Taylor, 1911). He describes the need for managers to take on responsibility for planning operations, selecting and hiring the appropriate workers, effectively training those workers, monitoring worker performance, and separating management and worker activities (Masterclass, 2020; "Taylorism | Scientific Management System | Britannica," 2020).

Concerning the Go/No-Go process, the essential element of Taylorism is to develop a science for each aspect of man's work, replacing the former "Rule of Thumb" method. Building upon this idea, (Dooley, 2000) states, "it is reasonable to assume that knowledge which is tacit and not easily imitated, as opposed to explicit knowledge, will grow in importance." Management should be responsible for planning operations breaks from the previous idea that individual workers could choose their own best practice to accomplish their given task. The reason behind the variance in methods to achieve a job is that tradespeople learned through observing those around them rather than through formal instruction(Taylor, 1911). Instead, Taylor believed that management's responsibility is to use science to determine the "one best way," or the most efficient method or implement to accomplish the task that is better than all of the rest. A scientific study and analysis of every technique in use must be performed (Masterclass, 2020).

Increasing productivity through scientific management can be seen since the late 1700s. Richard Arkwright brought together labor, resources, and central power to continuously spin wool, Adam Smith championed labor specialization to increase output while reducing time, Henry Ford's assembly line and lean manufacturing are all examples of this school of thought(Alizon et al., n.d.; Schmenner, 2015; Tann, 2013; Vidal et al., 2007). These examples show that an established framework of responsibilities and processes can and likely increase efficiency and productivity compared to an ad hoc method of accomplishing the same tasks.

2.3.2 Six Sigma Approach

The Six Sigma (6σ) theory has a basis in statistics, hence the name, and is both a business strategy and a process improvement strategy. Initially, Six Sigma was a quality benchmark, introduced in 1986 by Motorola scientist and engineer Bill Smith to address a high instance of warranty claims. The term sigma indicates the deviation in performance of a characteristic from its mean performance. More simply put, sigma is a measure of the variation of the output of a product or service from the average output. The key idea of Six Sigma is that variation of an operation's output is undesirable. Therefore it is imperative to measure variation and then develop and implement strategies to reduce said variation. (Antony, 2006)

Reducing variation is the entire premise of Six Sigma. More specifically, reducing the variation of crucial product quality measurement characteristics around target values to the level at which failures and defects are extremely unlikely. Ideally, the concept of Six Sigma is that specification limits are at least six standard deviations from the target. Assuming a normal distribution, this means that 99.9999% of all observations/opportunities fall within six standard deviations or 6σ of the mean. Another way to view this is that out of 1 million opportunities, only 3.4 should fall outside of 6σ(Montgomery & Woodall, 2008).

Six Sigma, along with Lean principles, is employed by many companies, including very large and very successful, across several industries. In addition to Motorola, companies such as Toyota, General Electric, Danaher Corporation, Honeywell, and even the Department of Defense (Arnheiter & Maleyeff, 2005; Basu, 2001; Harry, 1998; Kumar et al., 2006; Murman et al., 2002; Sharma, 2003; Womack & Jones, 1996).

The widespread use of Six Sigma and Lean principles lends credibility and positive effects. Implementing the continuous process improvement procedures explained will increase efficiency and productivity.

2.4 Applicability

The theories discussed above, Taylorism and Six Sigma, assert that standardization is a good thing, and is in fact, desirable. Does this pose the question, is standardization always desirable, or are there instances where it is undesirable? Positive uses of standardization include administrative and financial processes within many industries, including but not limited to healthcare and hospitality (Baum, 1999; Baum & Ingram, 1998; David & Rothwell, 1996; Kamimura et al., 2007; Romanelli, 1991; Tsai, 2001), as well as in factory and mass production settings (Alizon et al., n.d.; Deming, 1986; Taylor, 1911; Vidal et al., 2007). Alternatively, there can be a negative view of standardization when considering the overuse of exploitation (standardization, routinization) of best practices, leading to a reduction of exploration and innovation (Adler et al., 2009; Gupta et al., 2006; March, 1991; March & Simon, 1993). Essentially, the overuse of standardization may stifle institutional learning and innovation, causing business processes to stagnate rather than continuously improve.

This research also addresses the number of "touches" involved in the Go/No-Go process. Business Process Management (BPM) strives to lower costs while increasing revenues, employee motivation, and customer satisfaction (Rudden, 2007). One BPM method is Lean manufacturing, which focuses on reducing the waste, or "muda," that is a byproduct of inefficiencies. Specifically, the waste associated with multiple "touches" is over-processing (Arunagiri & Gnanavelbabu, 2014; Azevedo et al., 2019; Moreira et al.,

2010). This over-processing also leads to work duplication and role ambiguity, increasing employee stress and decreasing job satisfaction (Anam et al., 2018; Khuong & Yen, 2016). Furthermore, when role ambiguity occurs, no one may assume direct responsibility for the task, resulting in the absence of task completion (Sword, 2010). The counter to this argument is that there is reduced risk by verifying and validating previously performed steps in the process. Identifying errors earlier in the processes can increase the efficiency of the overall process (Fagan, 1986; Grady, 1992; Madachy, 1995; Radice & Phillips, 1988). By increasing touches, and therefore inspections, the process is less likely to fail.

III. Methodology

3.1 Overview

A case study, or idiographic research methodology, was conducted to meet research objectives. The term "Case Study" is broad and explained to mean different things by different scholars. A case study could be a qualitative study of small sample size, and ethnographic, clinical, or participant observer, research characterized by process tracing, research that investigates the properties of a single case or phenomenon(Campbell & Stanley, 1963; Eckstein, 1975; George & Bennett, 2004; Gerring, 2017; Yin, 1994). For this research, the case is focused on the AMC C-17 enterprise, explicitly reviewing the Go/No-Go procedures of six units.

By focusing on an individual MWS, the consistency of mission requirements and currency requirements do not need to be accounted for when analyzing the differences of current Go/No-Go practices across the various units. The study focuses on 6 cases, with each case composed of between one and three AD C-17 squadrons. Collecting unit Go/No-Go checklists from these squadrons were required to meet the objectives of this study. Additionally, the researcher collected reports from UEIs and SAVs to determine whether the current procedures meet baseline guidance.

3.2 Study Current Procedures

To verify the anecdotal evidence that there is a lack of standardization in the Go/No-Go process across the C-17 enterprise, the first order of business is to collect and compare the pre-mission checklists for each of the current C-17 units. Individual

Operations Group Standardization and Evaluations (OGV) personnel provided their Go/No-Go procedures upon request from the researcher.

3.2.1 Within-Case Analysis

Upon receipt of pre-mission Go/No-Go checklists from each of the C-17 units, a comparison commenced of each process, from beginning to end. These individual cases are of interest as they provide insights based on each case and analyze each case's commonality (Stake, 1995). The within-case analysis process identified the steps required to complete each unit's Go/No-Go process and assess the process's efficiency. By breaking down the overall process into sub-processes owned by different offices, it became possible to code specific tasks to each of these offices. However, the tasks assigned to the offices coded varied from unit to unit, which drove the need for cross-case analysis. Ayers states, "Coding works well to capture the commonalities of experience across cases but less well to capture the individual uniqueness within cases(Ayres et al., 2003). Coding and sorting the individual tasks to these offices also identified areas of redundancy and potential areas for improvement for each separate case. However, the goal of this project was not to improve each unit's checklist individually, instead to find a best practice for all C-17 units.

3.2.2 Cross-Case Analysis

After completing the individual case analyses, a cross-case analysis commenced. By intuiting or reflecting on commonalities found across multiple respondents, themes were found to tie the individual cases together (Ayres et al., 2003; Sarter, 1988). Each office's order completed its sub-processes in and the number of sub-processes, or

"touches," was investigated. Additionally, the researcher compared the total number of steps, and sub-steps, for each office. The total number of touches and steps for each of the units were summed and compared. The author identified both similarities and differences or outliers across the cases. These outliers further focused attention on their effect on the Go/No-Go process as a whole.

3.3 Analyze Inspection Data

3.3.1 Unit Effectiveness Inspection Reports

Besides gathering pre-mission Go/No-Go checklists directly from individual units, Headquarters AMC Standardization and Evaluation (A3V) delivered UEI reports upon request. These reports were reviewed, focusing primarily on the Go/No-Go procedures for each of the C-17 units. This study used only the most recent inspection report for each AMC C-17 unit. Consideration was given to commendable comments and discrepancies concerning the Go/No-Go process.

3.3.2 Standardization and Evaluation Visit Reports

Finally, OGV offices provided SAV reports for review. Unlike UEIs conducted by Headquarters AMC Inspector General (IG) personnel, personnel assigned within individual wings perform SAVs. For SAVs related to the Go/No-Go process, OGV personnel conducts the visits (or inspections), as the Go/No-Go process is a Standardization and Evaluations requirement per AFMAN 11-202V2. As each wing conducted its SAV, the assessments were not standardized, and individual inspection items varied.

IV. Analysis and Results

4.1 Case Analyses

4.1.1 Checklist Structure

Each of the six units utilized five offices (including the AC) except for Dover AFB and JB PH-H. These checklists did not include the SOC position within their checklist but did include the four other core offices utilized by the other bases. Although they did not have the checklist and mission package route through the SOC, other offices covered the steps the SOC was responsible for as part of the checklists used by Dover AFB and JB PH-H. The number of touches of each of the checklists varied from four to eight. The number of checklist steps varied from seventy to ninety-three.

Figure 1: Individual Unit Process Analysis

4.1.2 Scheduler

The scheduler's role in the Go/No-Go processes carried the most weight of responsibility across all units. On average, the scheduler is responsible for 23.8 individual

checklist items to close out their checklist portion(s). Half of the units utilize the schedulers in two separate touches, with one of the touches being focused on distilling mission information and requirements. A number of the steps completed by the schedulers have more to do with scheduling rather than Go/No-Go verification. Furthermore, many units use the scheduler to perform a cursory review of currency and grounding items before SARM completing their review. The scheduler acted as a liaison between the DOT and CCV/DOV offices for missions that include training and evaluations during the event. In the cases where the scheduler had two touches on the checklist, they typically reviewed the work SARM had performed and subsequently duplicated SARM's work as a form of verification.

4.1.3 SARM

The SARM is the only office with members that can access the ARMS database, the record system for aircrew member currencies. They, along with the HARM, are responsible for inputting data into the database to populate the Individual Training Summary (ITS) product that encompasses all of the currencies an aircrew member is responsible for maintaining. Many tracking, tasking, and scheduling use the ARMS database to generate currency reports and notifications. In line with the purpose of their office, the SARM office generates currency reports for each crew member assigned to a mission. Subsequently, it reviews those products to ensure they will be current and qualified through the scheduled duration of the mission. SARM also has access to the databases that record medical readiness items, physiological readiness, and flying hour reports for each crew member. SARM is responsible for ensuring each of these items will

be current through mission duration. Finally, SARM is a critical facilitator in the creation of the FA. They generate and track FA numbers and are signatory (in the form of initials) on the FA.

4.1.4 SOC/ADO

As noted above, only four of the six units utilize the SOC as part of the Go/No-Go checklist. The units that use the SOC have them perform a few primarily administrative tasks. In this role, the SOC is another source of review for "all previous checklist steps," adding value through verification of other's work. In addition to their review, they are utilized to complete the ORM worksheet, print and sign DTS authorizations and NATO orders, and compile mission binders for crews. On average, the SOC has the fewest steps of any of the offices.

4.1.5 FAAO

The FAAO is ultimately responsible for ensuring all aircrew members are current and qualified to perform their duties. As they are responsible for the final validation of aircrew readiness, nearly all of the steps they complete are reviewing other office's work. The FAAO reviews the currency and qualification of individual aircrew members and ensures all required paperwork is in place for mission execution. For example, the FAAO verifies MEP and interfly memorandums along with all waivers and higher-level approval coordination are complete and signed. They also review ORM and mission complexity and ensure the fitting crew complement is assigned to mitigate as much risk as possible. Like SARM, they are a signatory on the FA, and once they sign, the FA is valid.

4.1.6 Aircraft Commander

The AC is utilized in two separate ways during the Go/No-Go process by most units. Four of the six units have the AC review mission paperwork immediately following the SARM review. The AC prioritizes currency and training events during mission planning. They review the currency products SARM has provided and any TMS writeups or other comments and concerns from DOT. Additionally, this is a chance for the AC to verify the work that SARM has already completed, hopefully decreasing the chances for any errors that the FAAO must catch.

The AC is also part of the Go/No-Go process during the beginning steps of mission execution. Every base except McChord has steps listed for the AC to complete when the mission leaves the home station. Although omitted in the Go/No-Go Checklist, McChord does have a separate "Departing AC Checklist" that includes most of the steps the other units include in their Go/No-Go checklists. The AC's responsibilities ensure their mission binder is complete, they have all of the support equipment required, and the orders are accurate. Furthermore, the AC must ensure no significant events have occurred to any crew member since the FAAO signed the. This review includes signing off any FCIFs, and more importantly, any change in their medical status that would render them DNIF.

The variation in the number of checklist steps, number of touches, and even Go/No-Go structure was wide across the different units. Although there was such variation, the items accomplished within the process did not have much variation. Each unit emphasized the same items, and most units re-accomplished what they likely determined as critical items across the varying steps in the checklist.

Table 1: Individual Unit Step Analysis

	SARM	Scheduler	Operations Center	FAAO	Aircraft Commander	Total	
Charleston	2	2	1	1	2	8	Touches
	8	11	5	12	11	47	Steps
	6	12	0	0	5	23	Sub-Steps
	14	23	5	12	16	70	Total Steps
Dover	1	1	0	1	1	4	Touches
	10	15	0	18	8	51	Steps
	13	13	0	11	5	42	Sub-Steps
	23	28	0	29	13	93	Total Steps
Hickam	1	2	0	1	1	5	Touches
	17	26	0	16	8	67	Steps
	0	8	0	0	8	16	Sub-Steps
	17	34	0	16	16	83	Total Steps
McChord	1	1	1	1	1	5	Touches
	15	24	8	15	8	70	Steps
	0	0	0	0	0	0	Sub-Steps
	15	24	8	15	8	70	Total Steps
McGuire	2	1	2	1	1	7	Touches
	17	16	11	16	8	68	Steps
	0	0	0	0	12	12	Sub-Steps
	17	16	11	16	20	80	Total Steps
Travis	2	2	1	1	2	8	Touches
	11	15	5	14	19	64	Steps
	6	3	0	2	3	14	Sub-Steps
	17	18	5	16	22	78	Total Steps
Average	1.5	1.5	0.8	1.0	1.3	6.2	Touches
	13.0	17.8	4.8	15.2	10.3	61.2	Steps
	4.2	6.0	0.0	2.2	5.5	17.8	Sub-Steps
	17.2	23.8	4.8	17.3	15.8	79.0	Total Steps

4.2 UEI and SAV Findings Analysis

4.2.1 UEI Findings

Headquarters AMC/A3V provided the most recent UEI results for each of the five AMC C-17 bases. Of the five bases, only four had strengths or deficiencies identified in the results of the inspections. Of the four, only three had Go/No-Go items explicitly

identified for the C-17 units (JB MDL identified deficiencies in the KC-10 Go/No-Go process). Furthermore, the identified area at Dover AFB had to do with SARM but focused on the post-mission review rather than the Go/No-Go process. Although not directly related, inaccuracies in ARMS input could result in members showing current and qualified when they are not. Erroneous currency reports would be a significant issue for grounding items once the currency has lapsed. The only other deficiency noted was at JB Charleston and was related to the DNIF log utilized during the Go/No-Go process. Specifically, verification for five of the thirteen aircrew members listed the DNIF status was impossible, as the log was out of date.

The major limitation of using UEI data to analyze the unit's Go/No-Go programs is that it is not a Major Graded Area (MGA). The MGAs for these UEIs are Managing Resources, Leading People, Improving the Unit, and Executing the Mission. Although the Go/No-Go process is part of executing the mission, all of the strengths identified fell under Improving the Unit. Without emphasizing the Go/No-Go process explicitly, a deep inspection of the process will not likely occur during a UEI.

4.2.2 SAV Findings

Only three of the six bases provided SAV results. JB LM and JB Charleston provided SAV reports for each of their three squadrons, and JB MDL provided an SAV report for their only C-17 squadron. The SAV area with the most impact on the Go/No-Go is AF Form 4324 and LOX discrepancies. JB Charleston's SAV results are not value-adding for the Go/No-Go analysis, as there was only an open-ended question on the topic "What is CCV's role in go-no-go?" Each of the four remaining squadrons had issues with

both areas, which may have resulted in aircrew members either flying when they were not qualified or flying in a higher crew qualification than they should have. JB LM's SAV reports identify that GITMS generates the LOX. There is currently a known issue with the program resulting in issues generating a document free from errors. Additionally, they noted permissions issues within GTIMS that prevented the LOX from being signed by the required official. Although this is a small sample size, issues across these seven squadrons were uniform.

V. Conclusion and Recommendations

5.1 Conclusions of Research

This study resulted in a few conclusions following the within-case and cross-case analyses of the Go/No-Go procedures of C-17 units. The first conclusion is that there are inefficiencies in every unit concerning multiple offices completing the same work. There are several items that the FAAO must review before signing the FA, including medical, ground training, flying training, and mobility readiness items. It would be exhaustive for the FAAO to complete a thorough review of every aircrew member's reports with no support. For this reason, the initial evaluation of currency and qualification items is accomplished by at least one other office before the FAAO completing the final verification.

Although the purpose of the Go/No-Go process is to ensure all crew members are current and qualified, there are steps within each of the individual unit checklists that miss that goal. Specifically, administrative items such as completing DTS orders, assigning physical responsibility of controlled items, signing out MREs and additional gear have no impact on whether the crew can legally fly the mission. Furthermore, tasks completed by the AC before FAAO signature are focused on reviewing crewmember training writeups and identifying training goals or priorities for individuals. These tasks should be placed on a separate mission planning checklist rather than adding touches and steps to the Go/No-Go process.

Finally, a cross-case analysis did not uncover any unique requirements at any individual base. JB Charleston has the Special Operations Low-Level II (SOLL II) mission, and JB LM has the Primary Nuclear Airlift Force (PNAF) Ice missions. Neither base had Go/No-Go items unique to these missions. Similarly, there were no items on the Go/No-Go checklist that addressed the differences between Airland-Only bases and Airland-Airdrop bases. Thus, this study determined no reason for variation across the units concerning Go/No-Go processes or checklists. A standardized checklist would be appropriate for the C-17 enterprise. This conclusion aligns with previous literature on standardization and its proper use. Ensuring aircrew are qualified to operate the aircraft requires no need for innovation or specialization at the individual unit level. Units could argue against standardization if there was such a need.

5.2 Significance of Research

The focus of this research was solely on the C-17 enterprise; however, transferring these results to other MWSs is possible. Although each MWS has unique currency items, the process of verifying that aircrew members are current and qualified is consistent, especially within AMC. The development of a standardized Go/No-Go process would provide consistency across the MAJCOM and increase interoperability between units. Without an investigation into the Go/No-Go processes, it is difficult to assess the current processes' validity and efficiency, especially since UEIs do not thoroughly review them. Additionally, units conducting SAV inspections are not required to submit their results to any organization outside their wing.

5.3 Recommendations for Action

To provide a standardized Go/No-Go process for subordinate units, Headquarters AMC/A3V should consider implementing their guidance. Higher-level regulations dictate the requirements included in unit-developed procedures and checklists. However, units are required to consolidate this information for ease of use. The deviations across different units were additional administrative tasks and locally developed verification systems. This guidance should include the systems of record used to complete the process and a review of the effectiveness of those systems. For example, JB Charleston's UEI report suggests using GTIMS to input training accomplishments to ARMS; however, the SAV reports from JB LM identified that there were issues with GTIMS causing errors within the LOX module.

The Go/No-Go process design should include an analysis of risk that AMC/A3V is willing to assume. There is a variation in the number of touches and steps across the bases studied. The argument for efficiency states that there should be a streamlined process that equally tasks the offices concerning time, with the least number of transfers. Additionally, to reduce the number of steps, there should be a minimal duplication of tasks and efforts across the process. Although this would make a more efficient process, reducing the number of inspections results in additional assumed. If the goal of the process design is to minimize the risk at the expense of efficiency, the process should include or maintain the duplication of tasks in the spirit of risk reduction.

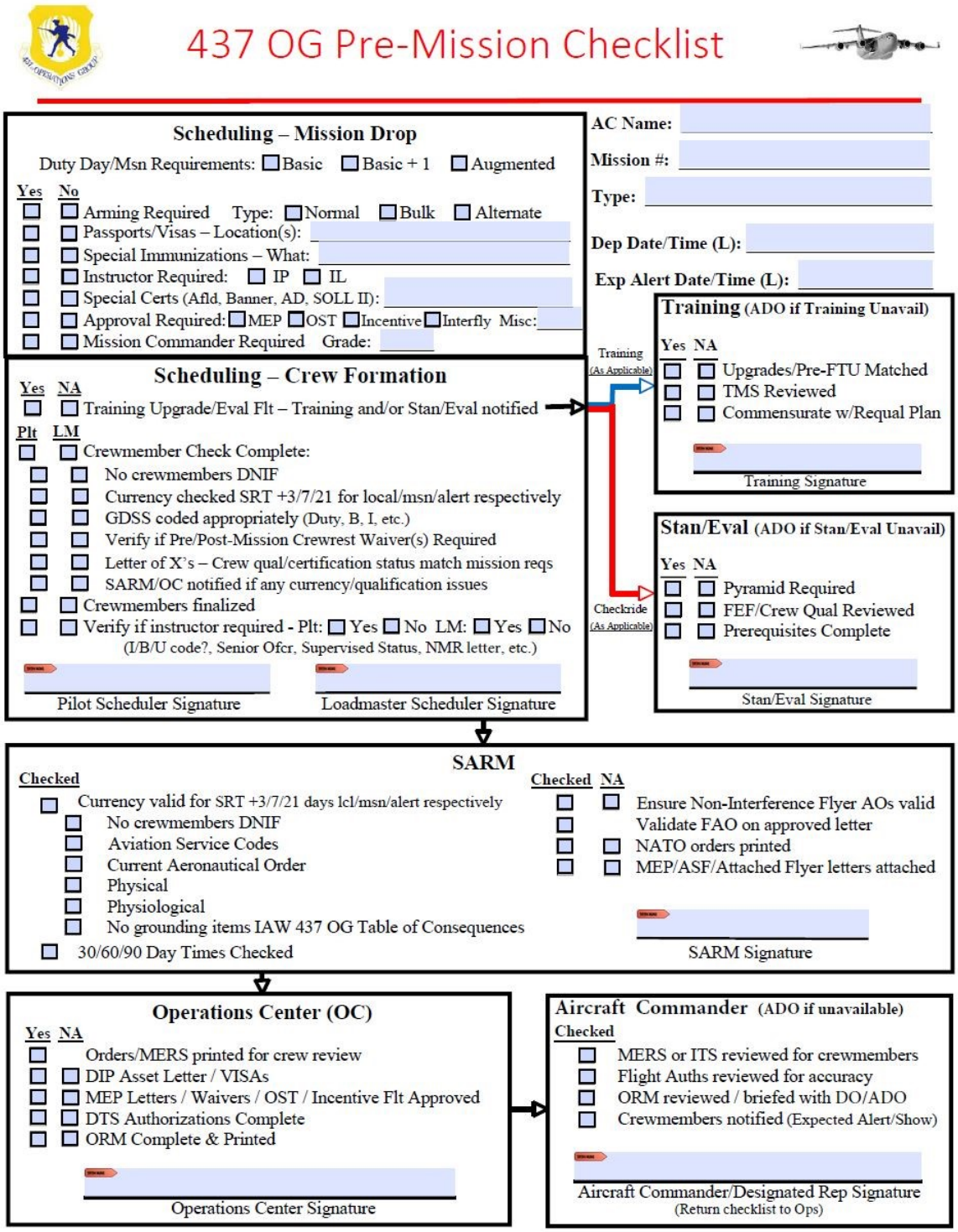
5.4 Recommendations for Future Research

To design the most efficient Go/No-Go process, researching the current procedures for at least one unit must be accomplished. The designer should apply

Taylorism and Six Sigma tools to complete such a process, to reduce the variation within a process. As part of the Six Sigma project, the researcher should consider conducting a time-and-motion study of the Go/No-Go process from start to finish. This study would help establish a baseline for the process, identify unnecessary movements and steps, and further reduce variation. After identifying inefficiencies, it is possible to remove the requirement for multiple iterations of review.

The application of the methodology used for the C-17 is transferrable to other MWSs, both within and outside AMC. Removing variation and increasing the ability to determine the legality of an aircrew member to execute a mission applies to all USAF aircraft. Once used across the inventory of AMC MWSs, evaluating the effectiveness of the command's Go/No-Go processes is possible.

Appendix A. Charleston Go/No-Go Checklist



Appendix B. Dover Go/No-Go Checklist

436 OG GO/NO-GO CHECKLIST			
Call Sign		Mission Number	
Aircraft Commander		Crew Rest Start (L)	
Departure Date (L)		Alert/Show (L)	
SRT (L)		FSRT (L)	

	SARM
	1. Check GDSS2 mission detail and setup sheet
	2. Check go/no-go browser, individual currency snapshots and 7/30/90 day totals
	3. Check grounding items for completion and validity through FSRT: a. Current Aeronautical Order ▪ Second character of ASC should be A, C, D, E, S, T, U, W, or X ▪ If B, G, H, J, K, L, R, P, Z or number contact HARM (677-5451) b. Ensure member is not DNIF ▪ Physical availability code should be A or B c. Verify **Ground Training Requirements (Grounded)** table (Page 2) d. Verify 7/30/90 day flying times (56/125/330 hours) will not be exceeded
	4. Verify qualification and currencies through FSRT: a. Reference Signed/Live Letter of X for qualifications and certifications b. Reference NMR and Supervised Status letters for restrictions c. Reference GTIMS/ARMS for currencies d. Ensure unqualified, noncurrent (B), NMR (I), and Supervised Status ($) crewmembers are under instructor supervision
	5. Verify interfly, attachment, and MEP letters
	6. *(If FS flying)* Complete 436 OG Flight Surgeon Go/No-Go Checklist
	7. *(For ASFP)* Verify valid participant letter, current PHA, and CC/DO FAAO
	8. Verify GDSS2 crew information: a. Duty positions b. Flight Authorization remark codes (add remarks for B/I code on FA)
	9. Print NATO/DTS orders
	10. Print/Initial Flight Authorization
Signature:	

			SCHEDULERS
			1. Verify crew complement meets mission requirements
			2. Check grounding items for completion and validity through FSRT: a. Verify not DNIF (PAC should be A or B) b. Aeronautical Order c. Verify Security clearance date in GDSS d. Verify **Ground Training Requirements (Grounded)** table (Page 2)
			3. Verify qualification and currencies through FSRT: a. Reference signed/live Letter of X for qualifications and certifications b. Reference NMR and Supervised Status letters for restrictions c. Reference GTIMS/ARMS for currencies d. Ensure unqualified, noncurrent (B), NMR (I), and Supervised Status ($) crewmembers are under instructor supervision
			4. Phoenix Banner/Silver/Copper missions: a. AC experienced (≥100 hours in command), CAT II current b. LM requirements met (2 for C-17, 3 for C-5)
			5. Verify combined experience meets SQ guidance
			6. Verify 7/30/90 day flying times (56/125/330 hours) will not be exceeded
			7. Coordinate passport and visa requirements
			8. Coordinate with DOT for training and upgrade priorities
			9. Coordinate with CCV to ensure all evaluation prerequisites are met
			10. Enter and verify GDSS2 crew information: a. Duty positions b. Flight Authorization remark codes
			11. Check itinerary for certification, approved, or special PIC airfields a. Reference ASRR Table 7-1 and AMCI11-211, para 3.5
			12. Ensure Pre/Post Mission Crew Rest requirements are met
			13. Notify FCC manager/scheduler
			14. Verify scheduling board and binder cover match GDSS2
			15. Notify crew with LFA times and update GDSS2 with notification
		Pilot Signature:	
	Flight Engineer Signature:		
Loadmaster Signature:			

OPR: 436 OG/OGV CAO: 17 Jul 2020 Page 1 of 2

FLIGHT AUTHORIZATION AUTHENTICATING OFFICIAL	
	1. Verify crew complement meets mission requirements
	2. Check grounding items for completion and validity through FSRT: a. Verify not DNIF (PAC should be A or B) b. Aeronautical Order c. Verify Security clearance date in GDSS d. Verify **Ground Training Requirements (Grounded)** table (Page 2)
	3. Verify qualification and currencies through FSRT: a. Reference signed/live Letter of X for qualifications and certifications b. Reference NMR and Supervised Status letters for restrictions c. Reference GTIMS/ARMS for currencies d. Ensure unqualified, noncurrent (B), NMR (I), and Supervised Status ($) crewmembers are under instructor supervision
	4. Verify combined experience meets SQ guidance
	5. Verify 7/30/90 day flying times (56/125/330 hours) will not be exceeded
	6. Verify duty positions and remark codes in GDSS2
	7. Verify interfly, attachment, and MEP letters
	8. Verify compliance with passport and visa requirements
	9. Verify compliance with applicable AOR reporting instructions
	10. Coordinate with DOT for training and upgrade priorities
	11. Flight evaluations: a. Coordinate with CCV to ensure all prerequisites are met b. Ensure DO's Review is complete for applicable local TMS/Tng Folder
	12. Complete applicable mission or local ORM worksheet a. Obtain approval for elevated risk if required
	13. *(If FS flying)* Complete 436 OG Flight Surgeon Go/No-Go Checklist
	14. *(For ASFP)* Verify valid participant letter and current PHA
	15. Verify Flight Authorization is complete and accurate
	16. Sign NATO orders in blue ink
	17. Sign Flight Authorization
	18. *(Infectious Disease missions)* Comply with guidance ePubs (All_Global\Infectious Disease) and HQ AMC FCIFs in FCBs
Signature:	

AIRCRAFT COMMANDER	
	1. Verify Flight Authorization for completeness and accuracy: a. Verify duty positions and remark codes b. Ensure unqualified, noncurrent (B), NMR (I), and Supervised Status ($) crewmembers are under instructor supervision
	2. Check go/no-go & currency products for ea. crewmember. Upload/print as req
	3. Ensure each crewmember has signed off the latest FCIF and read files in GTIMS a. If GTIMS is unavailable initial the original Flight Authorization and annotate the FCIF number
	4. *(If FS flying)* Complete 436 OG Flight Surgeon Go/No-Go Checklist
	5. *(For ASFP)* Ensure participant has required equipment and egress training
	6. Initial Flight Authorization verifying go/no-go checks have been completed for all crewmembers
	7. Complete and print (as required) applicable mission or local ORM worksheet a. Obtain approval for elevated risk if required
	8. Verify NATO orders for all crewmembers including FS and MEP
Signature:	

C-17 Ground Training Requirements

Required for Flight (Grounded)		Required to Fly Unsupervised (NMR)		Mobility Requirements (Restrictions May Apply)	
Flight Physical	GC11Y-GC14Y	GD39Y	GX91Y-94Y	GM11Y	LL04
Physiological Tng	GD11Y	GD27Y	GN03Y	GM12Y	LL05
LL01	AA01/02	SS02	GD55Y (P)	GE03Y	SS03
LL03	AA11/12	SS05		GM09Y	SS07
LL06		AC27Y		GM21Y	TG03Y
LL07				GD17Y	GM03Y
SS01				GE07Y	GD75Y
				GH01Y (P)	

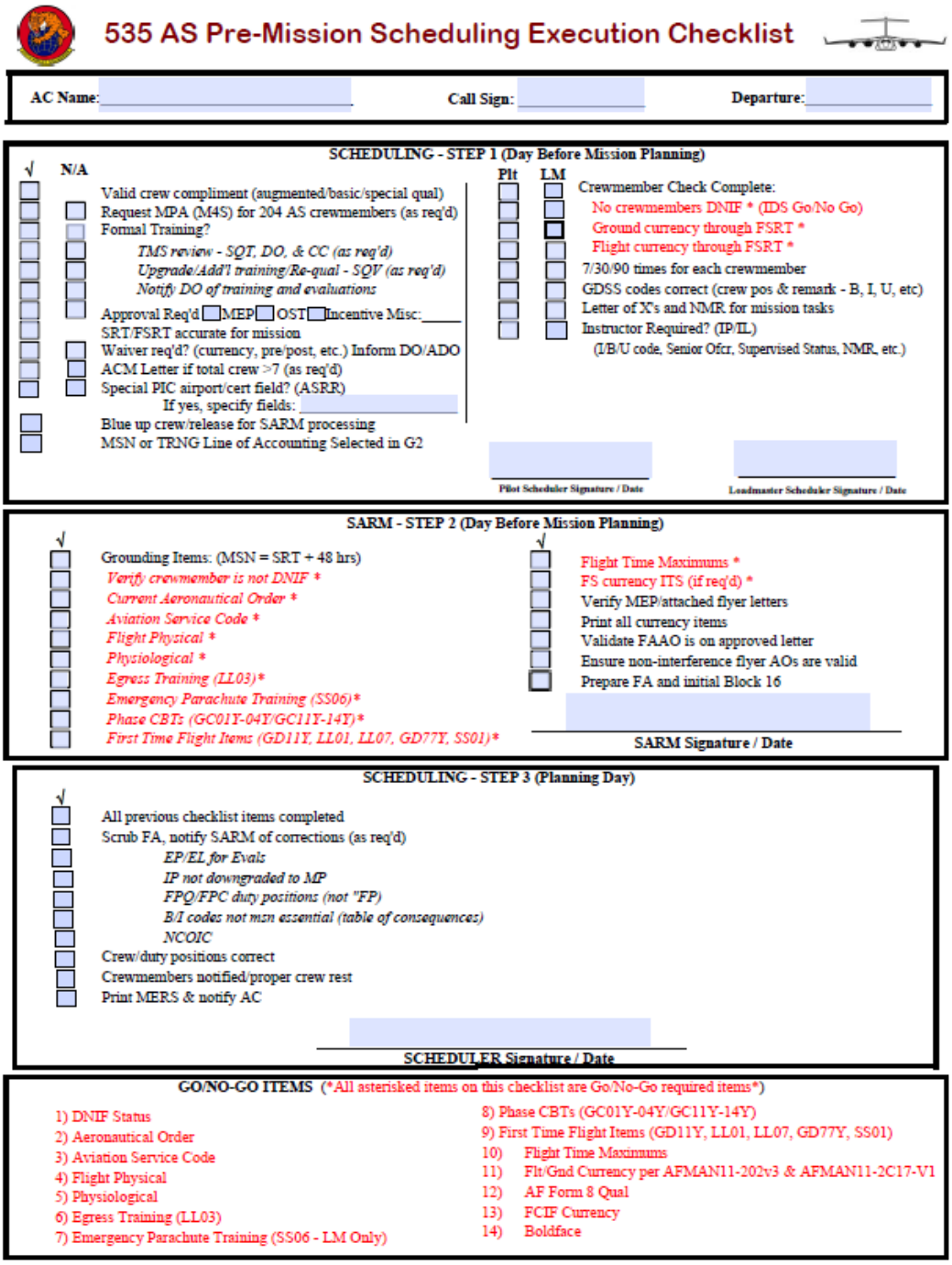
Refer to latest C-17 RTM, AFMAN 11-2C-17V1 and AFI 11-301V1 for event descriptions and further requirements

C-5 Ground Training Requirements

Required for Flight (Grounded)		Required to Fly Unsupervised (NMR)		Mobility Requirements (Restrictions May Apply)	
Flight Physical	LL01	GC27Y	GD15Y (FE, L)	GM11Y	LL04
Physiological Tng	LL03	GH01Y (P)	GD39Y (AC, L)	GM12Y	LL05
GD05Y (MP+, FE)	LL06	GC33Y	GD55Y (P)	GE01Y	LL07
GD55Y (FP+)	SS01	SS02		GM09Y	SS03
GD11Y (MQT) (AB05Y)		SS05		GM21Y	SS07
		AA01/AC27Y		GM03Y	TG03Y
		AA11 (P)		GD75Y	GD17Y

Refer to latest C-5 RTM, AFMAN 11-2C-5V1 and AFI 11-301V1 for event descriptions and further requirements

Appendix C. Hickam Go/No-Go Checklist



535 AS Pre-Mission Scheduling Execution Checklist

AC Name: _____ Call Sign: _____ Departure: _____

SCHEDULING - STEP 1 (Day Before Mission Planning)

√	N/A	
☐		Valid crew compliment (augmented/basic/special qual)
☐	☐	Request MPA (M4S) for 204 AS crewmembers (as req'd)
☐		Formal Training?
☐	☐	*TMS review - SQT, DO, & CC (as req'd)*
☐	☐	*Upgrade/Add'l training/Re-qual - SQV (as req'd)*
☐	☐	*Notify DO of training and evaluations*
☐	☐	Approval Req'd ☐ MEP ☐ OST ☐ Incentive Misc: ____
☐		SRT/FSRT accurate for mission
☐	☐	Waiver req'd? (currency, pre/post, etc.) Inform DO/ADO
☐	☐	ACM Letter if total crew >7 (as req'd)
☐	☐	Special PIC airport/cert field? (ASRR)
		If yes, specify fields: _____
☐		Blue up crew/release for SARM processing
☐		MSN or TRNG Line of Accounting Selected in G2

Plt	LM	
☐	☐	Crewmember Check Complete:
☐	☐	No crewmembers DNIF * (IDS Go/No Go)
☐	☐	Ground currency through FSRT *
☐	☐	Flight currency through FSRT *
☐	☐	7/30/90 times for each crewmember
☐	☐	GDSS codes correct (crew pos & remark - B, I, U, etc)
☐	☐	Letter of X's and NMR for mission tasks
☐	☐	Instructor Required? (IP/IL)
		(I/B/U code, Senior Ofcr, Supervised Status, NMR, etc.)

_____ Pilot Scheduler Signature / Date

_____ Loadmaster Scheduler Signature / Date

SARM - STEP 2 (Day Before Mission Planning)

√		√	
☐	Grounding Items: (MSN = SRT + 48 hrs)	☐	Flight Time Maximums *
☐	*Verify crewmember is not DNIF * *	☐	FS currency ITS (if req'd) *
☐	*Current Aeronautical Order * *	☐	Verify MEP/attached flyer letters
☐	*Aviation Service Code * *	☐	Print all currency items
☐	*Flight Physical * *	☐	Validate FAAO is on approved letter
☐	*Physiological * *	☐	Ensure non-interference flyer AOs are valid
☐	*Egress Training (LL03)**	☐	Prepare FA and initial Block 16
☐	*Emergency Parachute Training (SS06)**		
☐	*Phase CBTs (GC01Y-04Y/GC11Y-14Y)**		
☐	*First Time Flight Items (GD11Y, LL01, LL07, GD77Y, SS01)**		

_____ SARM Signature / Date

SCHEDULING - STEP 3 (Planning Day)

√	
☐	All previous checklist items completed
☐	Scrub FA, notify SARM of corrections (as req'd)
☐	*EP/EL for Evals*
☐	*IP not downgraded to MP*
☐	*FPQ/FPC duty positions (not "FP)*
☐	*B/I codes not msn essential (table of consequences)*
☐	*NCOIC*
☐	Crew/duty positions correct
☐	Crewmembers notified/proper crew rest
☐	Print MERS & notify AC

_____ SCHEDULER Signature / Date

GO/NO-GO ITEMS (*All asterisked items on this checklist are Go/No-Go required items*)

1) DNIF Status
2) Aeronautical Order
3) Aviation Service Code
4) Flight Physical
5) Physiological
6) Egress Training (LL03)
7) Emergency Parachute Training (SS06 - LM Only)
8) Phase CBTs (GC01Y-04Y/GC11Y-14Y)
9) First Time Flight Items (GD11Y, LL01, LL07, GD77Y, SS01)
10) Flight Time Maximums
11) Flt/Gnd Currency per AFMAN11-202v3 & AFMAN11-2C17-V1
12) AF Form 8 Qual
13) FCIF Currency
14) Boldface

535 AS Go/No-Go Checklist

File with flight orders for 1 year per AFI 33- 364
Version 9.5, 18 Jun 2020

FAAO - STEP 4 (Planning Day)

√	N/A	
☐		Crew compliment/experience has been considered against mission/local complexity
☐		Flight physical, physiological, egress training and aeronautical orders are current (no DNIF) *
☐		Flight/ground currency requirements met IAW applicable directives *
☐		7/30/90 day times checked *
☐		AF Form 8 qualification statuses/LOX *
☐		Supervised Status Letter checked
☐		Orders checked for accuracy ("B" & "I" coded crewmembers supervised as req'd -- check NMR letter)
☐	☐	MEP are authorized with an OG/CC signed letter (as req'd)
☐	☐	Airfield qualification or special crew qualification requirements met (as req'd)
☐	☐	Waivers approved, Sq/CC notified (currency, pre/post, etc. [provided to SARM as req'd])
☐	☐	SSS approved? (OST, flyover, airshow, spouse flight) (as req'd)
☐	☐	DIP Asset Letter/VISAs (if req'd)
☐		ORM completed. Score is _____. Low ☐ Mod ☐ High ☐ Severe ☐
☐	☐	NATO orders printed, signed, & stamped (blue ink)/checked against FA (as req'd)
☐		FA signed (digitally w/ CAC or blue ink)
☐		Print signed FA, ORM (include graph), Go/No-Go Checklist

All above procedures have been complied with.

_____
FAAO Signature / Date

AC GO/NO-GO CHECKLIST - STEP 5 (Execution Day)

√	
	It is the AC's responsibility to check currency & remark codes for the duration of the mission
☐	FCIF and Boldface review in GTIMS (FCIF # on left side of orders if GTIMS is unavailable) *
☐	Leave on Blue Clipboard signed copy of ☐ ORM worksheet ☐ Go/No-Go Checklist ☐ Original FA
☐	Minimum of 3 EFBs available/updated/charged
☐	Designate a crewmember to maintain positive control of secrets, SKL, tactics, weapons, and NVGs
☐	Complete and sign ORM - obtain necessary approval for increased ORM
☐	Complete COVID ORM worksheet (if applicable)
☐	Sign out MREs, PPE from mission planning room (if required)
☐	Flight Orders:
☐	Input aircraft tail number on orders (Block 9)
☐	Confirm that "B" or "I" coded crewmembers are under instructor supervision as req'd (Block 11)
☐	Add MEP data as req'd (see Departing A/C Checklist for req'd information)
☐	Initial (always) and sign (for additions) Go/No-Go Verification on FA (Block 16)
☐	All changes to aircrew prior to launch require verbal approval from an approving official
☐	If any changes are made to crew compliment, verify valid compliment exists (basic/augmented)
☐	Contact Command Post (448-6900) with changes to FA information (as req'd)
☐	Confirm the FAAO has signed the FA (Block 18)

→ GO / NO-GO
(circle one)

CTK #: _____ **Binder #:** _____

Checked out by: _____

The above procedures have been complied with.

_____
AC Signature / Date

ADO USE ONLY

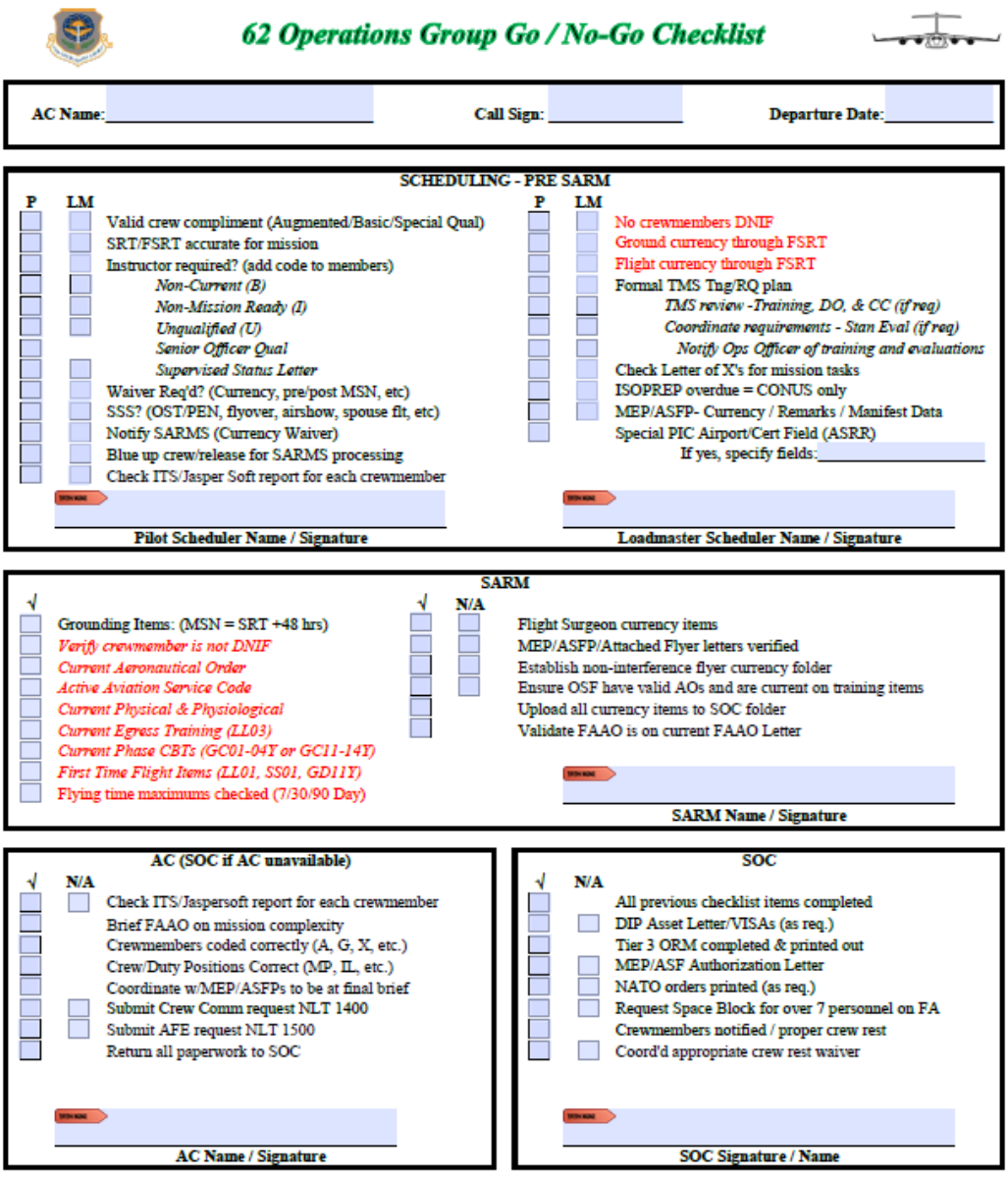
Mission Returned Date _____

Paperwork Review Date _____ _____

Post Mission Checklist

√	
☐	COMSEC: Return COMSEC to secure storage facility using crew comm
☐	AFE: Return all checked out equipment: C-SELS, Helmets, NVGs, ALEPs & Weapons.
☐	TACTICS/INTEL/SERE: Return items to secure storage: DTB, SERE Bag, CTII & updated intel products.
☐	CTK: Return CTK and computer
☐	MSN BINDER: Return physical binder to ops. Shred FOUO docs. Scan & send **PDF**s of 781s/MERs to SARM via MM
	MSN HISTORY: Turn in copy to support
☐	MREs: If used return with filled out form and $5 per MRE to the ADO office. Otherwise return to CTK room.
☐	TMS: Complete TMS writeups within 24 hours of PMCR completion.
☐	DTS: Complete DTS voucher with 5 days of HOME STATION return.

Appendix D. McChord Go/No-Go Checklist



62 Operations Group Go / No-Go Checklist

AC Name: _____ Call Sign: _____ Departure Date: _____

SCHEDULING - PRE SARM

P	LM		P	LM	
☐	☐	Valid crew compliment (Augmented/Basic/Special Qual)	☐	☐	No crewmembers DNIF
☐	☐	SRT/FSRT accurate for mission	☐	☐	Ground currency through FSRT
☐	☐	Instructor required? (add code to members)	☐	☐	Flight currency through FSRT
☐	☐	*Non-Current (B)*	☐	☐	Formal TMS Tng/RQ plan
☐	☐	*Non-Mission Ready (I)*	☐	☐	*TMS review -Training, DO, & CC (if req)*
☐	☐	*Unqualified (U)*	☐	☐	*Coordinate requirements - Stan Eval (if req)*
☐	☐	*Senior Officer Qual*	☐	☐	*Notify Ops Officer of training and evaluations*
☐	☐	*Supervised Status Letter*	☐	☐	Check Letter of X's for mission tasks
☐	☐	Waiver Req'd? (Currency, pre/post MSN, etc)	☐	☐	ISOPREP overdue = CONUS only
☐	☐	SSS? (OST/PEN, flyover, airshow, spouse flt, etc)	☐	☐	MEP/ASFP- Currency / Remarks / Manifest Data
☐	☐	Notify SARMS (Currency Waiver)	☐		Special PIC Airport/Cert Field (ASRR)
☐	☐	Blue up crew/release for SARMS processing			If yes, specify fields: _____
☐	☐	Check ITS/Jasper Soft report for each crewmember			

Pilot Scheduler Name / Signature

Loadmaster Scheduler Name / Signature

SARM

√		√	N/A	
☐	Grounding Items: (MSN = SRT +48 hrs)	☐	☐	Flight Surgeon currency items
☐	*Verify crewmember is not DNIF*	☐	☐	MEP/ASFP/Attached Flyer letters verified
☐	*Current Aeronautical Order*	☐	☐	Establish non-interference flyer currency folder
☐	*Active Aviation Service Code*	☐	☐	Ensure OSF have valid AOs and are current on training items
☐	*Current Physical & Physiological*	☐		Upload all currency items to SOC folder
☐	*Current Egress Training (LL03)*	☐		Validate FAAO is on current FAAO Letter
☐	*Current Phase CBTs (GC01-04Y or GC11-14Y)*			
☐	*First Time Flight Items (LL01, SS01, GD11Y)*			
☐	Flying time maximums checked (7/30/90 Day)			

SARM Name / Signature

AC (SOC if AC unavailable)

√	N/A	
☐	☐	Check ITS/Jaspersoft report for each crewmember
☐		Brief FAAO on mission complexity
☐		Crewmembers coded correctly (A, G, X, etc.)
☐		Crew/Duty Positions Correct (MP, IL, etc.)
☐		Coordinate w/MEP/ASFPs to be at final brief
☐	☐	Submit Crew Comm request NLT 1400
☐	☐	Submit AFE request NLT 1500
☐		Return all paperwork to SOC

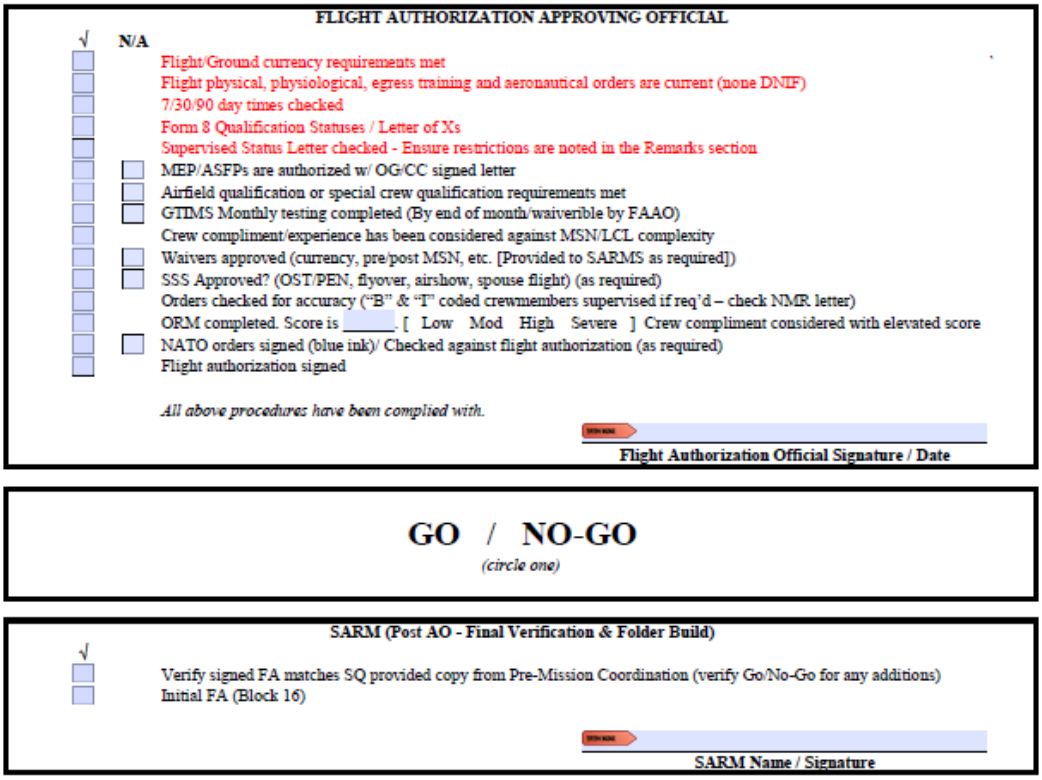
AC Name / Signature

SOC

√	N/A	
☐		All previous checklist items completed
☐	☐	DIP Asset Letter/VISAs (as req.)
☐		Tier 3 ORM completed & printed out
☐	☐	MEP/ASF Authorization Letter
☐	☐	NATO orders printed (as req.)
☐	☐	Request Space Block for over 7 personnel on FA
☐		Crewmembers notified / proper crew rest
☐	☐	Coord'd appropriate crew rest waiver

SOC Signature / Name

File with flight orders for 1 year per AFI 33-364 Version 9.4, 30 Oct 19



FLIGHT AUTHORIZATION APPROVING OFFICIAL

√	N/A	
☐		Flight/Ground currency requirements met
☐		Flight physical, physiological, egress training and aeronautical orders are current (none DNIF)
☐		7/30/90 day times checked
☐		Form 8 Qualification Statuses / Letter of Xs
☐		Supervised Status Letter checked - Ensure restrictions are noted in the Remarks section
☐	☐	MEP/ASFPs are authorized w/ OG/CC signed letter
☐	☐	Airfield qualification or special crew qualification requirements met
☐	☐	GTIMS Monthly testing completed (By end of month/waiverible by FAAO)
☐		Crew compliment/experience has been considered against MSN/LCL complexity
☐	☐	Waivers approved (currency, pre/post MSN, etc. [Provided to SARMS as required])
☐	☐	SSS Approved? (OST/PEN, flyover, airshow, spouse flight) (as required)
☐		Orders checked for accuracy ("B" & "T" coded crewmembers supervised if req'd – check NMR letter)
☐		ORM completed. Score is _____. [Low Mod High Severe] Crew compliment considered with elevated score
☐	☐	NATO orders signed (blue ink)/ Checked against flight authorization (as required)
☐		Flight authorization signed

All above procedures have been complied with.

Flight Authorization Official Signature / Date

GO / NO-GO

(circle one)

SARM (Post AO - Final Verification & Folder Build)

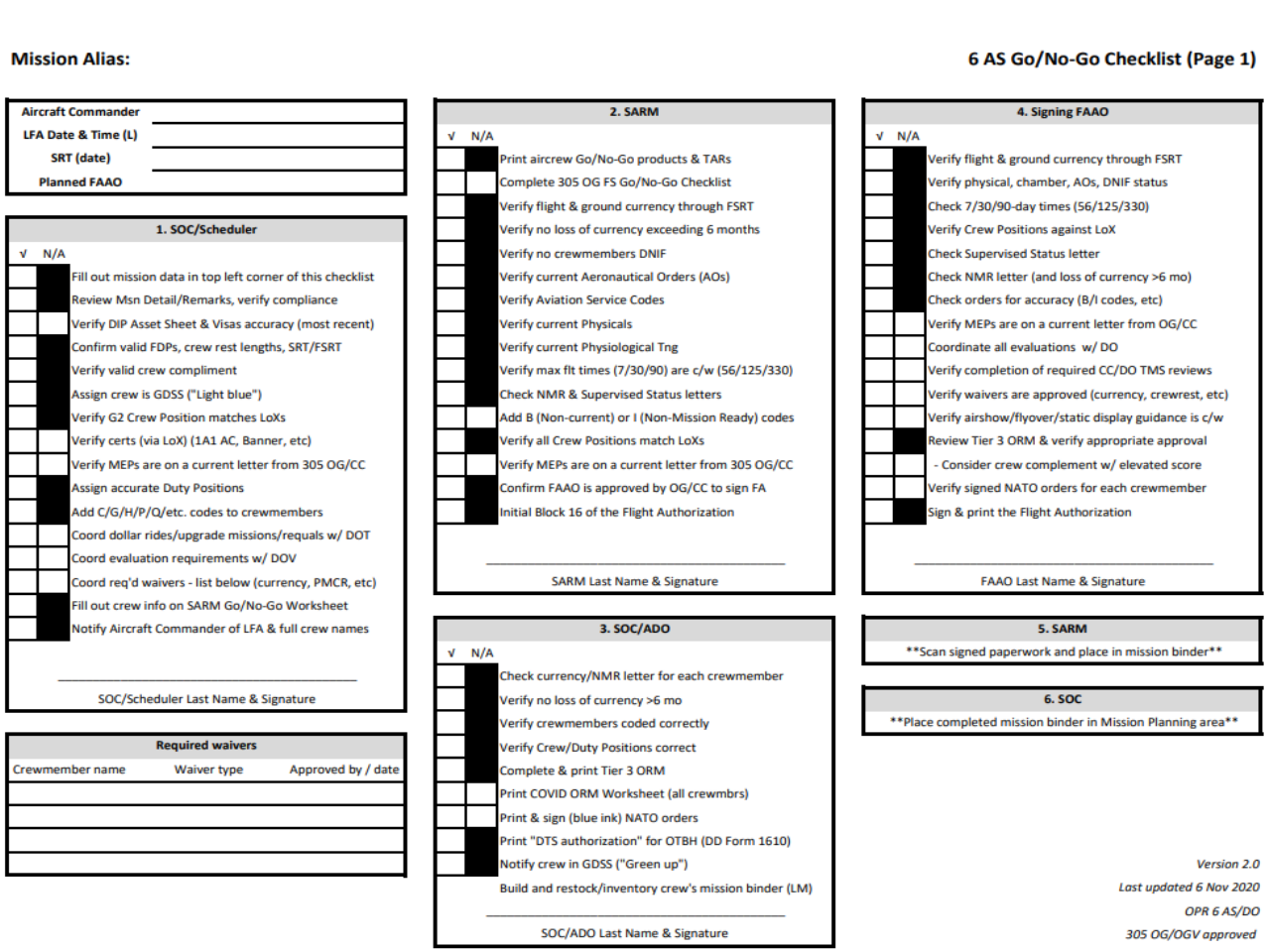
√	
☐	Verify signed FA matches SQ provided copy from Pre-Mission Coordination (verify Go/No-Go for any additions)
☐	Initial FA (Block 16)

SARM Name / Signature

File with flight orders for 1 year per AFI 33-364

Version 9.4, 30 Oct 19

Appendix E. McGuire Go/No-Go Checklist



Mission Alias:

6 AS Go/No-Go Checklist (Page 1)

Aircraft Commander	
LFA Date & Time (L)	
SRT (date)	
Planned FAAO	

1. SOC/Scheduler

√	N/A	
		Fill out mission data in top left corner of this checklist
		Review Msn Detail/Remarks, verify compliance
		Verify DIP Asset Sheet & Visas accuracy (most recent)
		Confirm valid FDPs, crew rest lengths, SRT/FSRT
		Verify valid crew compliment
		Assign crew is GDSS ("Light blue")
		Verify G2 Crew Position matches LoXs
		Verify certs (via LoX) (1A1 AC, Banner, etc)
		Verify MEPs are on a current letter from 305 OG/CC
		Assign accurate Duty Positions
		Add C/G/H/P/Q/etc. codes to crewmembers
		Coord dollar rides/upgrade missions/requals w/ DOT
		Coord evaluation requirements w/ DOV
		Coord req'd waivers - list below (currency, PMCR, etc)
		Fill out crew info on SARM Go/No-Go Worksheet
		Notify Aircraft Commander of LFA & full crew names

SOC/Scheduler Last Name & Signature

Required waivers

Crewmember name	Waiver type	Approved by / date

2. SARM

√	N/A	
		Print aircrew Go/No-Go products & TARs
		Complete 305 OG FS Go/No-Go Checklist
		Verify flight & ground currency through FSRT
		Verify no loss of currency exceeding 6 months
		Verify no crewmembers DNIF
		Verify current Aeronautical Orders (AOs)
		Verify Aviation Service Codes
		Verify current Physicals
		Verify current Physiological Tng
		Verify max flt times (7/30/90) are c/w (56/125/330)
		Check NMR & Supervised Status letters
		Add B (Non-current) or I (Non-Mission Ready) codes
		Verify all Crew Positions match LoXs
		Verify MEPs are on a current letter from 305 OG/CC
		Confirm FAAO is approved by OG/CC to sign FA
		Initial Block 16 of the Flight Authorization

SARM Last Name & Signature

3. SOC/ADO

√	N/A	
		Check currency/NMR letter for each crewmember
		Verify no loss of currency >6 mo
		Verify crewmembers coded correctly
		Verify Crew/Duty Positions correct
		Complete & print Tier 3 ORM
		Print COVID ORM Worksheet (all crewmbrs)
		Print & sign (blue ink) NATO orders
		Print "DTS authorization" for OTBH (DD Form 1610)
		Notify crew in GDSS ("Green up")
		Build and restock/inventory crew's mission binder (LM)

SOC/ADO Last Name & Signature

4. Signing FAAO

√	N/A	
		Verify flight & ground currency through FSRT
		Verify physical, chamber, AOs, DNIF status
		Check 7/30/90-day times (56/125/330)
		Verify Crew Positions against LoX
		Check Supervised Status letter
		Check NMR letter (and loss of currency >6 mo)
		Check orders for accuracy (B/I codes, etc)
		Verify MEPs are on a current letter from OG/CC
		Coordinate all evaluations w/ DO
		Verify completion of required CC/DO TMS reviews
		Verify waivers are approved (currency, crewrest, etc)
		Verify airshow/flyover/static display guidance is c/w
		Review Tier 3 ORM & verify appropriate approval
		- Consider crew complement w/ elevated score
		Verify signed NATO orders for each crewmember
		Sign & print the Flight Authorization

FAAO Last Name & Signature

5. SARM

Scan signed paperwork and place in mission binder

6. SOC

Place completed mission binder in Mission Planning area

Version 2.0

Last updated 6 Nov 2020

OPR 6 AS/DO

305 OG/OGV approved

Mission Alias: **6 AS Go/No-Go Checklist (Page 2)**

7. Aircraft Commander (Crew Show)		
√	N/A	
	■	Verify all blocks on prior checklists have been completed
		Ensure all crewmember signs off FCIFs in GTIMs
		- If unable to access GTIMs, annotate FCIF # & initials on orders
	■	Ensure entire crew has all required paper pubs and current EPubs
	■	Complete and sign Tier 4 ORM for current day & COVID ORM for each crewmember
		- Access and complete AvORM online to max extent possible
		- If unavailable, complete paper copy
	■	- AC will enter health/stress and fatigue score (even if 0)
		Input aircraft tail number in Block 9 on orders (XX-XXXX)
		Confirm B or I coded crewmembers are under instructor supervision
	■	Verify FAAO signed the Flight Authorization (Block 18)
		Initial orders (Block 16) if no changes or only removals
		- All changes prior to launch require verbal approval from an FAAO
		- If any changes to crew complement, verify valid complement still exists
		- Add MEP data if required (see 305 OG Aircraft Commander Guide)
		- If crew members added, sign the Go/No-Go verification (Block 16)
		- Provide updated copy of orders to C2 (AMCC, or CP, etc)
	■	Circle GO or NO-GO and sign below to certify the above items are complete
	■	Provide copy of signed DD Form 1801 or 175 to Base Ops
	■	Leave original Flight Authorization, ORM, COVID ORM and this checklist in designated area

GO or **NO-GO**

If you circle "NO-GO" immediately contact Squadron DO or Commander

_____ Aircraft Commander Signature/Date

8. Aircraft Commander (Post Flight)		
√	N/A	
	■	Turn in the following items/equipment
		- Secrets to Crew Comm or Command Post
		- Stratus puck to Base Ops
		- E&E bag to SERE
		- Mission Planning Laptop to SSR
		- Weapons to Armory
		- Helmets/NVGs/ALEPs to AFE
		Debrief Intel (if not accomplished at enroute location)
		Fill out / turn in necessary reports (HATRs, Form 97s, Bird Strikes, ASAPs, etc)
		Instructors: sign off training accomplished on semiannual NMR letter in FAAO binder
		For training flights: fill out training accomplishment block on the bottom of this sheet
	■	Ensure accuracy of AFTO 781s
	■	- Verify number of takeoffs and landings match TARs for Zulu date
	■	- Verify flight time logged (IP/EP) matches Duty Position on FA & 781
		- Verify instrument time is logged for all instrument approaches (cannot exceed primary time except for IP/EP time in seat with flight controls)
		- Verify night time for all crewmembers (P/S/I/E) between sunset/sunrise
		- Add remark on back of 781 for any GOATs (logged as T&G on 781 but not on TARs)
		- Add remark on back of 781 for any evaluations given
	■	Turn in the following paperwork in the designated area
	■	- This checklist (signed below to certify the above items are complete)
	■	- Flight Authorization(s) w/ AC initials (multiple req'd for enroute crew changes) - Original AFTO 781s with AC and Mx initials
	■	- TARs for each qualified crewmember with dates matching AFTO 781s
	■	- ORM worksheets for each duty day (unless completed online)/COVID ORM Worksheet
		- Oceanic Plotting Charts and Master Documents

_____

Aircraft Commander Signature/Date

Training Accomplishment (Locals & OSTs)
Subjective training effectiveness % based on actual crew requirements (10% increments):
Brief description of lost training and reason for any delays or early termination:

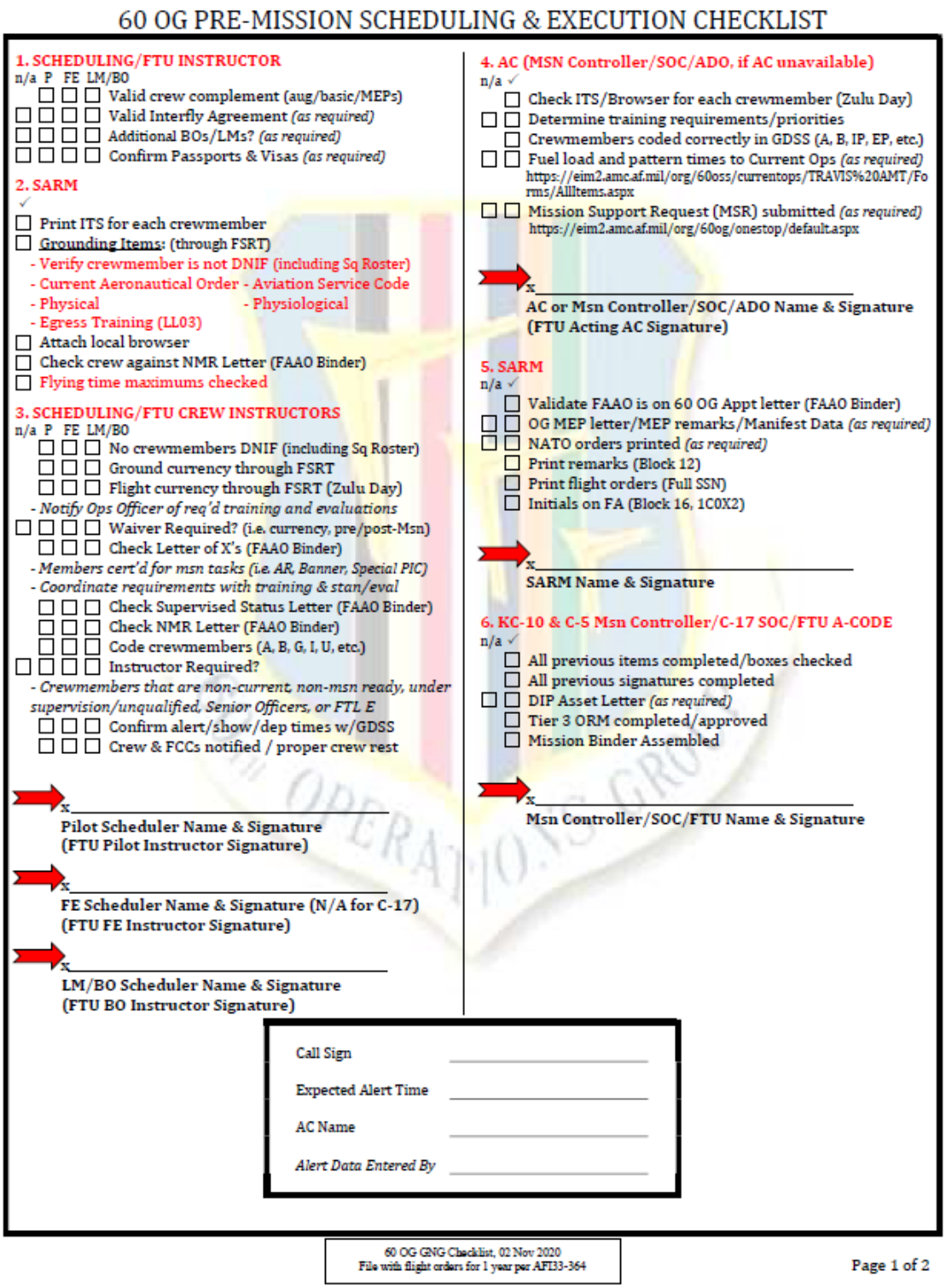
Version 2.0

Last updated 6 Nov 2020

OPR 6 AS/DO

305 OG/OGV approved

Appendix F. Travis Go/No-Go Checklist



60 OG PRE-MISSION SCHEDULING & EXECUTION CHECKLIST

1. SCHEDULING/FTU INSTRUCTOR

n/a P FE LM/BO

- ☐ ☐ ☐ Valid crew complement (aug/basic/MEPs)
- ☐ ☐ ☐ ☐ Valid Interfly Agreement *(as required)*
- ☐ ☐ ☐ ☐ Additional BOs/LMs? *(as required)*
- ☐ ☐ ☐ ☐ Confirm Passports & Visas *(as required)*

2. SARM

✓

- ☐ Print ITS for each crewmember
- ☐ Grounding Items: (through FSRT)
  - Verify crewmember is not DNIF (including Sq Roster)
  - Current Aeronautical Order - Aviation Service Code
  - Physical - Physiological
  - Egress Training (LL03)
- ☐ Attach local browser
- ☐ Check crew against NMR Letter (FAAO Binder)
- ☐ Flying time maximums checked

3. SCHEDULING/FTU CREW INSTRUCTORS

n/a P FE LM/BO

- ☐ ☐ ☐ No crewmembers DNIF (including Sq Roster)
- ☐ ☐ ☐ Ground currency through FSRT
- ☐ ☐ ☐ Flight currency through FSRT (Zulu Day)
  - *Notify Ops Officer of req'd training and evaluations*
- ☐ ☐ ☐ ☐ Waiver Required? (i.e. currency, pre/post-Msn)
- ☐ ☐ ☐ Check Letter of X's (FAAO Binder)
  - *Members cert'd for msn tasks (i.e. AR, Banner, Special PIC)*
  - *Coordinate requirements with training & stan/eval*
- ☐ ☐ ☐ Check Supervised Status Letter (FAAO Binder)
- ☐ ☐ ☐ Check NMR Letter (FAAO Binder)
- ☐ ☐ ☐ Code crewmembers (A, B, G, I, U, etc.)
- ☐ ☐ ☐ ☐ Instructor Required?
  - *Crewmembers that are non-current, non-msn ready, under supervision/unqualified, Senior Officers, or FTL E*
- ☐ ☐ ☐ Confirm alert/show/dep times w/GDSS
- ☐ ☐ ☐ Crew & FCCs notified / proper crew rest

x_____

Pilot Scheduler Name & Signature
(FTU Pilot Instructor Signature)

x_____

FE Scheduler Name & Signature (N/A for C-17)
(FTU FE Instructor Signature)

x_____

LM/BO Scheduler Name & Signature
(FTU BO Instructor Signature)

4. AC (MSN Controller/SOC/ADO, if AC unavailable)

n/a ✓

- ☐ Check ITS/Browser for each crewmember (Zulu Day)
- ☐ ☐ Determine training requirements/priorities
- ☐ Crewmembers coded correctly in GDSS (A, B, IP, EP, etc.)
- ☐ ☐ Fuel load and pattern times to Current Ops *(as required)*
  https://eim2.amc.af.mil/org/60oss/currentops/TRAVIS%20AMT/Forms/AllItems.aspx
- ☐ ☐ Mission Support Request (MSR) submitted *(as required)*
  https://eim2.amc.af.mil/org/60og/onestop/default.aspx

x_____

AC or Msn Controller/SOC/ADO Name & Signature
(FTU Acting AC Signature)

5. SARM

n/a ✓

- ☐ Validate FAAO is on 60 OG Appt letter (FAAO Binder)
- ☐ ☐ OG MEP letter/MEP remarks/Manifest Data *(as required)*
- ☐ ☐ NATO orders printed *(as required)*
- ☐ Print remarks (Block 12)
- ☐ Print flight orders (Full SSN)
- ☐ Initials on FA (Block 16, 1C0X2)

x_____

SARM Name & Signature

6. KC-10 & C-5 Msn Controller/C-17 SOC/FTU A-CODE

n/a ✓

- ☐ All previous items completed/boxes checked
- ☐ All previous signatures completed
- ☐ ☐ DIP Asset Letter *(as required)*
- ☐ Tier 3 ORM completed/approved
- ☐ Mission Binder Assembled

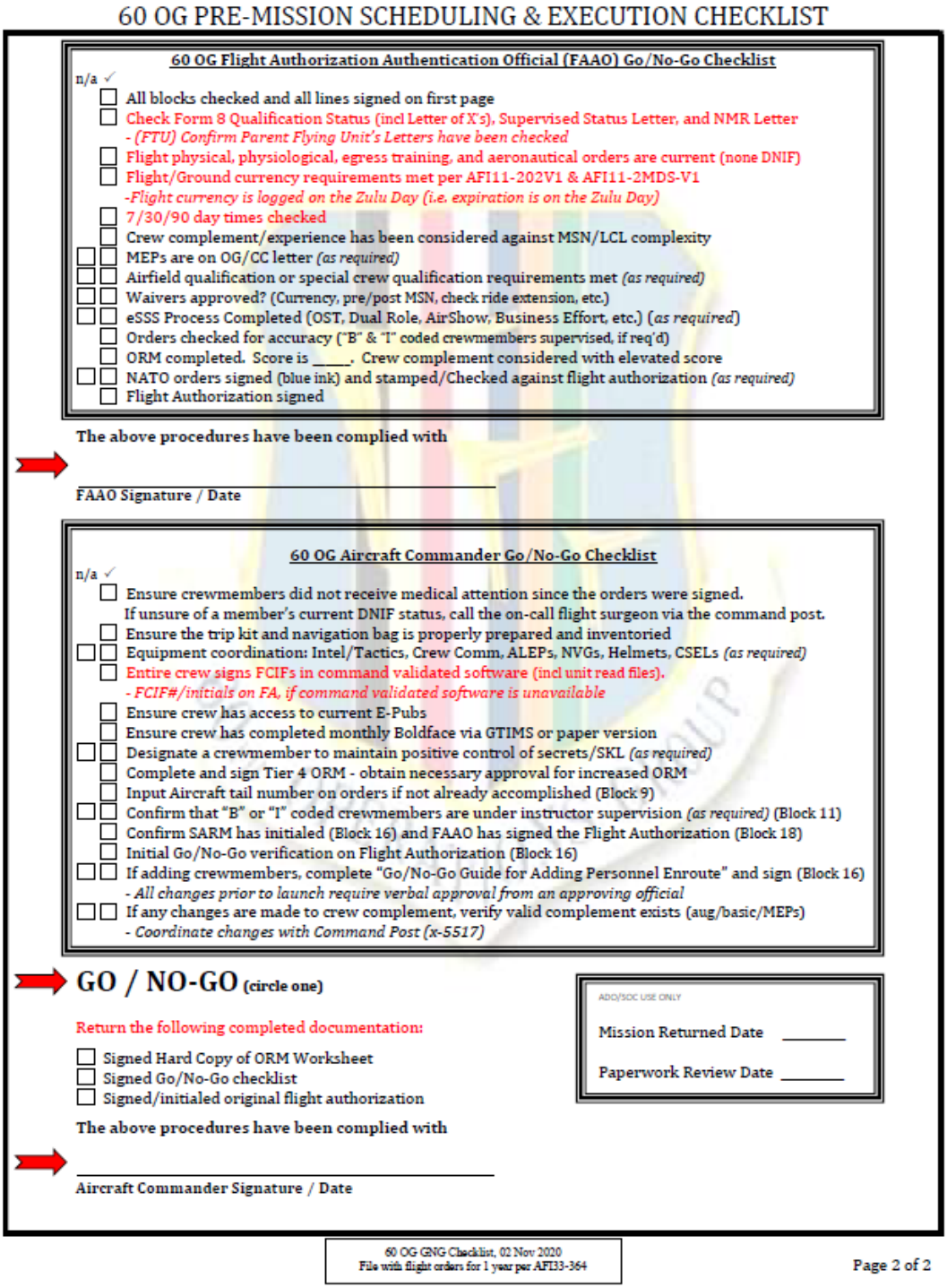
x_____

Msn Controller/SOC/FTU Name & Signature

Call Sign	_____
Expected Alert Time	_____
AC Name	_____
Alert Data Entered By	_____

60 OG GNG Checklist, 02 Nov 2020
File with flight orders for 1 year per AFI33-364

Page 1 of 2



60 OG PRE-MISSION SCHEDULING & EXECUTION CHECKLIST

60 OG Flight Authorization Authentication Official (FAAO) Go/No-Go Checklist

n/a ✓

- ☐ All blocks checked and all lines signed on first page
- ☐ Check Form 8 Qualification Status (incl Letter of X's), Supervised Status Letter, and NMR Letter
  - *(FTU) Confirm Parent Flying Unit's Letters have been checked*
- ☐ Flight physical, physiological, egress training, and aeronautical orders are current (none DNIF)
- ☐ Flight/Ground currency requirements met per AFI11-202V1 & AFI11-2MDS-V1
  - *Flight currency is logged on the Zulu Day (i.e. expiration is on the Zulu Day)*
- ☐ 7/30/90 day times checked
- ☐ Crew complement/experience has been considered against MSN/LCL complexity
- ☐ ☐ MEPs are on OG/CC letter *(as required)*
- ☐ ☐ Airfield qualification or special crew qualification requirements met *(as required)*
- ☐ ☐ Waivers approved? (Currency, pre/post MSN, check ride extension, etc.)
- ☐ ☐ eSSS Process Completed (OST, Dual Role, AirShow, Business Effort, etc.) (*as required*)
- ☐ Orders checked for accuracy ("B" & "I" coded crewmembers supervised, if req'd)
- ☐ ORM completed. Score is ____. Crew complement considered with elevated score
- ☐ ☐ NATO orders signed (blue ink) and stamped/Checked against flight authorization *(as required)*
- ☐ Flight Authorization signed

The above procedures have been complied with

_____

FAAO Signature / Date

60 OG Aircraft Commander Go/No-Go Checklist

n/a ✓

- ☐ Ensure crewmembers did not receive medical attention since the orders were signed.
  If unsure of a member's current DNIF status, call the on-call flight surgeon via the command post.
- ☐ Ensure the trip kit and navigation bag is properly prepared and inventoried
- ☐ ☐ Equipment coordination: Intel/Tactics, Crew Comm, ALEPs, NVGs, Helmets, CSELs *(as required)*
- ☐ Entire crew signs FCIFs in command validated software (incl unit read files).
  - *FCIF#/initials on FA, if command validated software is unavailable*
- ☐ Ensure crew has access to current E-Pubs
- ☐ Ensure crew has completed monthly Boldface via GTIMS or paper version
- ☐ ☐ Designate a crewmember to maintain positive control of secrets/SKL *(as required)*
- ☐ Complete and sign Tier 4 ORM - obtain necessary approval for increased ORM
- ☐ Input Aircraft tail number on orders if not already accomplished (Block 9)
- ☐ ☐ Confirm that "B" or "I" coded crewmembers are under instructor supervision *(as required)* (Block 11)
- ☐ Confirm SARM has initialed (Block 16) and FAAO has signed the Flight Authorization (Block 18)
- ☐ Initial Go/No-Go verification on Flight Authorization (Block 16)
- ☐ ☐ If adding crewmembers, complete "Go/No-Go Guide for Adding Personnel Enroute" and sign (Block 16)
  - *All changes prior to launch require verbal approval from an approving official*
- ☐ ☐ If any changes are made to crew complement, verify valid complement exists (aug/basic/MEPs)
  - *Coordinate changes with Command Post (x-5517)*

GO / NO-GO (circle one)

ADO/SOC USE ONLY

Mission Returned Date _____

Paperwork Review Date _____

Return the following completed documentation:

- ☐ Signed Hard Copy of ORM Worksheet
- ☐ Signed Go/No-Go checklist
- ☐ Signed/initialed original flight authorization

The above procedures have been complied with

_____

Aircraft Commander Signature / Date

60 OG GNG Checklist, 02 Nov 2020
File with flight orders for 1 year per AFI33-364

Page 2 of 2

BIBLIOGRAPHY

Adler, P. S., Benner, M., James, D., Paul, J., Osono, E., Staats, B. R., Takeuchi, H., Tushman, M. L., Winter, S. G., Brunner, D. J., Staats, B. R., & Tush-, M. L. (2009). Perspectives on the Productivity Dilemma. *Journal of Operations Management*, *27*(2), 99–113. https://doi.org/10.1016/j.jom.2009.01.004

Alizon, F., Shooter, S. B., & Simpson, T. W. (n.d.). *Henry Ford and the Model T: lessons for product platforming and mass customization*. https://doi.org/10.1016/j.destud.2009.03.003

Anam, K., Zafar, S., & Qaiser, S. (2018). Impact of Workload and Work Duplication on Employee's Performance. *Journal of Strategy and Performance Management*, *6*(2), 65–76. https://www.researchgate.net/publication/339077476_IMPACT_OF_WORKLOAD_AND_WORK_DUPLICATION_ON_EMPLOYEE%27S_PERFORMANCE

Antony, J. (2006). Six Sigma for service processes The Application of Lean Six Sigma in Policing Services View project Lean Business Models in Healthcare View project. *Article in Business Process Management Journal*. https://doi.org/10.1108/14637150610657558

Arnheiter, E. D., & Maleyeff, J. (2005). The integration of lean management and Six Sigma. *The TQM Magazine*, *17*(1), 5–18.

Arunagiri, P., & Gnanavelbabu, A. (2014). Identification of major lean production waste in automobile industries using weighted average method. *Procedia Engineering*, *97*, 2167–2175. https://doi.org/10.1016/j.proeng.2014.12.460

Ayres, L., Kavanaugh, K., & Knafl, K. A. (2003). Within-case and across-case approaches to qualitative data analysis. *Qualitative Health Research*, *13*(6), 871–883. https://doi.org/10.1177/1049732303013006008

Azevedo, J., Sá, J. C., Ferreira, L. P., Santos, G., Cruz, F. M., Jimenez, G., & Silva, F. J. G. (2019). Improvement of production line in the automotive industry through lean philosophy. *Procedia Manufacturing*, *41*, 1023–1030. https://doi.org/10.1016/j.promfg.2019.10.029

Basu, R. (2001). Six Sigma to fit Sigma. *IIE Solutions*, *33*(7), 28–33.

Baum, J. A. C. (1999). The Rise of Chain Nursing Homes in Ontario, 1971-1996:

Discovery Service for Air Force Institute of Technology. *Social Forces*, *78*(2), 543–583. https://doi.org/10.2307/3005567

Baum, J. A. C., & Ingram, P. (1998). Survival-Enhancing Learning in the Manhattan Hotel Industry, 1898-1980: Discovery Service for Air Force Institute of Technology. *Management Science*, *44*, 996–1016.

Campbell, D. T., & Stanley, J. (1963). *Experimental and Quasi-Experimental Designs for Research*. Houghton Mifflin.

David, P. A., & Rothwell, G. S. (1996). Standardization, diversity and learning: Strategies for the coevolution of technology and industrial capacity. *International Journal of Industrial Organization*, *14*(2), 181–201. https://doi.org/10.1016/0167-7187(95)00475-0

Deming, W. E. (1986). *Out of the Crisis | The MIT Press*. MIT-CAES.

Dooley, K. (2000). The Paradigms of Quality : Evolution and Revolution in the History of the Discipline. *Advances in the Management of Organizational Quality*, *5*(April), 1–28.

Eckstein, H. (1975). *Case Studies and Theory in Political Science*. University of California Press.

Fagan, M. E. (1986). Advances in Software Inspections. *IEEE Transactions on Software Engineering*, *SE-12*(7), 744–751.

George, A. L., & Bennett, A. (2004). *Case Studies and Theory Development*. MIT Press.

Gerring, J. (2017). What Is a Case Study and What Is It Good for? *American Political Science Review*, *98*(2). https://doi.org/10.1017/S0003055404001182

Grady, R. B. (1992). *Practical Software Metrics for Project Management and Process Improvement*. Prentice-Hall.

Gupta, A. K., Smith, K. G., & Shalley, C. E. (2006). The interplay between exploration and exploitation. *Academy of Management Journal*, *49*(4), 693–706. https://doi.org/10.5465/AMJ.2006.22083026

Harry, M. J. (1998). Six Sigma: a breakthrough strategy for profitability. *Quality Progress*, *31*(5), 60–64.

Ivanova, O. (2014). Modelling Inter-Regional Freight Demand with Input–Output, Gravity and SCGE Methodologies. In *Modeling Freight Transport* (pp. 13–42). Elsevier. https://doi.org/https://doi.org/10.1016/B978-0-12-410400-6.00002-1

Kamimura, A., Banaszak-Holl, J., Berta, W., Baum, J. A. C., Weigelt, C., & Mitchell, W. (2007). Do corporate chains affect quality of care in nursing homes? The role of corporate standardization. *Health Care Management Review*, *32*(2), 168–178. https://doi.org/10.1097/01.HMR.0000267794.55427.52

Khuong, M. N., & Yen, V. H. (2016). Investigate the Effects of Job Stress on Employee Job Performance — A Case Study at Dong Xuyen Industrial Zone, Vietnam. *International Journal of Trade, Economics and Finance*, *7*(2), 31–37. https://doi.org/10.18178/ijtef.2016.7.2.495

Kumar, M., Antony, J., Singh, R. K., Tiwari, M. K., & Perry, D. (2006). Implementing the lean sigma framework in an Indian SME: A case study. *Production Planning and Control*, *17*(4), 407–423. https://doi.org/10.1080/09537280500483350

Madachy, R. J. (1995). System dynamics modeling of an inspection-based process. *Proceedings - International Conference on Software Engineering*, 376–386. https://doi.org/10.1109/icse.1996.493432

March, J. G. (1991). Exploration and Exploitation in Organizational Learning. *Organizational Science*, *2*(1), 71–87.

March, J. G., & Simon, H. A. (1993). *Organizations*. Blackwell.

Masterclass. (2020). *Understanding Taylorism: The History of Scientific Management Theory - 2021 - MasterClass*. https://www.masterclass.com/articles/understanding-taylorism-the-history-of-scientific-management-theory

Montgomery, D. C., & Woodall, W. H. (2008). An Overview of Six Sigma. *International Statistical Review*, *76*, 329–346. https://doi.org/10.1111/j.1751-5823.2008.00061.x

Moreira, F., Alves, A. C., & Sousa, R. M. (2010). *Anabela Etall, 2009*. 100–108.

Müller, S., Wolfermann, A., & Huber, S. (2012). A Nation-wide Macroscopic Freight Traffic Model. *Procedia - Social and Behavioral Sciences*, *54*, 221–230. https://doi.org/10.1016/j.sbspro.2012.09.741

Murman, E., Allen, T., Bozdogan, K., & Cutch, J. (2002). *Lean Enterprise Value: Insights from MIT's Lean Aerospace Initiative*. Palgrave.

Nguyen, C. T. (2002). *An interactive decision support system for scheduling fighter pilot training*. Air Force Institute of Technology.

Radice, R. A., & Phillips, R. W. (1988). *Software Engineering - An Industrial Approach*. Prentice-Hall.

Romanelli, E. (1991). The Evolution of New Organizational Forms. In *Annual Review of Sociology* (Vol. 17, Issue 1, pp. 79–103).

Rudden, J. (2007). Making the Case for BPM : A Benefits Checklist. *BPTrends*, *January*, 1–8. www.bptrends.com

Sarter, B. (1988). *Paths to knowledge: Innovative research methods for nursing*. National League for Nursing.

Schmenner, R. W. (2015). The pursuit of productivity. *Production and Operations Management*, *24*(2), 341–350. https://doi.org/10.1111/poms.12230

Sharma, U. (2003). Implementing Lean principles with the Six Sigma advantage: How a battery company realized significant improvements. *Journal of Organizational Excellence*, *22*(3), 43–52.

Stake, R. E. (1995). *The art of Case Study Research*. Sage.

Sword, D. (2010). *Conflicts from confused roles and responsibilities*. https://deborahsword.com/2010/07/26/conflicts-from-confused-roles-and-responsibilities/

Tann, J. (2013). RICHARD ARKWRIGHT AND TECHNOLOGY. *Journal of Chemical Information and Modeling*, *53*(9), 1689–1699. https://www.jstor.org/stable/24408232

Taylor, F. W. (1911). *THE PRINCIPLES OF SCIENTIFIC MANAGEMENT* (p. 144). Harper & Brothers.

Taylorism | scientific management system | Britannica. (2020). In *Britannica*. https://www.britannica.com/science/Taylorism

Tsai, W. (2001). Knowledge transfer in intraorganizational networks: Effects of network position and absorptive capacity on business unit innovation and performance. *Academy of Management Journal*, *44*(5), 996–1004. https://doi.org/10.2307/3069443

Ünal, H. T., & Başçiftçi, F. (2020). Using evolutionary algorithms for the scheduling of aircrew on airborne early warning and control system. *Defence Science Journal*, *70*(3), 240–248. https://doi.org/10.14429/dsj.70.15055

Vidal, M., Farnham, J., Handel, M., Luria, D., Peck, J., Rogers, J., & White, R. (2007). Lean Production, Worker Empowerment, and Job Satisfaction: A Qualitative Analysis and Critique*. *Critical Sociology*, *33*, 247–278. https://doi.org/10.1163/156916307X168656

Womack, J. P., & Jones, D. T. (1996). *Lean Thinking: Banish Waste and Create Wealth in Your Corporation*. Simon and Schuster.

Yin, R. K. (1994). *Case Study Research: Design and Methods*. Sage.

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.

1. REPORT DATE *(DD-MM-YYYY)*	2. REPORT TYPE	3. DATES COVERED *(From - To)*
04-06-2021	Graduate Research Paper	July 2020 - June 2021

4. TITLE AND SUBTITLE

Go/No-Go Process Standardization Across AMC's C-17 Fleet

5a. CONTRACT NUMBER

5b. GRANT NUMBER

5c. PROGRAM ELEMENT NUMBER

6. AUTHOR(S)

Brooks, Kevin W, Major

5d. PROJECT NUMBER

5e. TASK NUMBER

5f. WORK UNIT NUMBER

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)

Air Force Institute of Technology
Graduate School of Engineering and Management (AFIT/EN)
2950 Hobson Way
Wright-Patterson AFB OH 45433-7765

8. PERFORMING ORGANIZATION REPORT NUMBER

AFIT-ENS-MS-21-J-037

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)

Air Mobility Command
Chief, Aircrew Standardization and Evaluation Division, Col Donald W. Schmidt
1600 Scott Drive
Scott AFB, IL 62225
donald.schmidt.1@us.af.mil

10. SPONSOR/MONITOR'S ACRONYM(S)

AMC/A3V

11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT

DISTRIBUTION STATEMENT A: APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED.

13. SUPPLEMENTARY NOTES

This material is declared a work of the U.S. Government and is not subject to copyright protection in the United States.

14. ABSTRACT

The increasing world population, modernization, and globalization continue to increase the strain on the global transportation resources. Both infrastructure, vehicles, and personnel continue to operate at higher rates. It is imperative to ensure those operating vehicles that are massive in scale are qualified and capable of carrying out their critical role in transportation activities with an enormous impact on the global economy to meet the demands of international logistics.

This research, in particular, focuses on the pre-mission currency and qualification verification of the United States Air Force's C-17 Globemaster III aircrew. By conducting a case study on the current processes in place by six C-17 units and codifying and analyzing commonalities and differences across these units to determine the efficiencies and wasted efforts across Air Mobility Command's strategic logistic assets. This study uncovers the need for standardization in the pre-mission aircrew qualification procedures based on process improvement principles.

15. SUBJECT TERMS

Scheduling, Standardization, Lean, Process Improvement

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			Lt Col Jason R. Anderson
U	U	U	UU	54	19b. TELEPHONE NUMBER *(Include area code)* (937) 255-3636 Jason.Anderson@afit.edu

Reset

INSTRUCTIONS FOR COMPLETING SF 298

1. REPORT DATE. Full publication date, including day, month, if available. Must cite at least the year and be Year 2000 compliant, e.g. 30-06-1998; xx-06-1998; xx-xx-1998.

2. REPORT TYPE. State the type of report, such as final, technical, interim, memorandum, master's thesis, progress, quarterly, research, special, group study, etc.

3. DATES COVERED. Indicate the time during which the work was performed and the report was written, e.g., Jun 1997 - Jun 1998; 1-10 Jun 1996; May - Nov 1998; Nov 1998.

4. TITLE. Enter title and subtitle with volume number and part number, if applicable. On classified documents, enter the title classification in parentheses.

5a. CONTRACT NUMBER. Enter all contract numbers as they appear in the report, e.g. F33615-86-C-5169.

5b. GRANT NUMBER. Enter all grant numbers as they appear in the report, e.g. AFOSR-82-1234.

5c. PROGRAM ELEMENT NUMBER. Enter all program element numbers as they appear in the report, e.g. 61101A.

5d. PROJECT NUMBER. Enter all project numbers as they appear in the report, e.g. 1F665702D1257; ILIR.

5e. TASK NUMBER. Enter all task numbers as they appear in the report, e.g. 05; RF0330201; T4112.

5f. WORK UNIT NUMBER. Enter all work unit numbers as they appear in the report, e.g. 001; AFAPL30480105.

6. AUTHOR(S). Enter name(s) of person(s) responsible for writing the report, performing the research, or credited with the content of the report. The form of entry is the last name, first name, middle initial, and additional qualifiers separated by commas, e.g. Smith, Richard, J, Jr.

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES). Self-explanatory.

8. PERFORMING ORGANIZATION REPORT NUMBER. Enter all unique alphanumeric report numbers assigned by the performing organization, e.g. BRL-1234; AFWL-TR-85-4017-Vol-21-PT-2.

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES). Enter the name and address of the organization(s) financially responsible for and monitoring the work.

10. SPONSOR/MONITOR'S ACRONYM(S). Enter, if available, e.g. BRL, ARDEC, NADC.

11. SPONSOR/MONITOR'S REPORT NUMBER(S). Enter report number as assigned by the sponsoring/ monitoring agency, if available, e.g. BRL-TR-829; -215.

12. DISTRIBUTION/AVAILABILITY STATEMENT. Use agency-mandated availability statements to indicate the public availability or distribution limitations of the report. If additional limitations/ restrictions or special markings are indicated, follow agency authorization procedures, e.g. RD/FRD, PROPIN, ITAR, etc. Include copyright information.

13. SUPPLEMENTARY NOTES. Enter information not included elsewhere such as: prepared in cooperation with; translation of; report supersedes; old edition number, etc.

14. ABSTRACT. A brief (approximately 200 words) factual summary of the most significant information.

15. SUBJECT TERMS. Key words or phrases identifying major concepts in the report.

16. SECURITY CLASSIFICATION. Enter security classification in accordance with security classification regulations, e.g. U, C, S, etc. If this form contains classified information, stamp classification level on the top and bottom of this page.

17. LIMITATION OF ABSTRACT. This block must be completed to assign a distribution limitation to the abstract. Enter UU (Unclassified Unlimited) or SAR (Same as Report). An entry in this block is necessary if the abstract is to be limited.