SQUADRON OFFICER COLLEGE
14B THINK TANK GROUP 3

IMPLEMENTING A WING INNOVATION OFFICE

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EXECUTIVE SUMMARY

In January 2013, the USAF released a new vision, "The World's Greatest Air Force - Powered by Airmen, Fueled by Innovation." Chief of Staff General Mark A. Welsh III recognizes the importance of innovation in particular, stating "the Service's unmatched capabilities exist only and precisely because of the imagination, innovation, and dedication of its people." Nevertheless, programs designed to encourage innovation, particular those geared towards process efficiency and cost reduction, have not developed a culture in which Airmen embrace innovation. AETC seeks a solution to promote innovative thinking, improve mission effectiveness, and increase efficiency.

Thus, Group 3 recommends a beta test WIO at the 81st Training Wing (81 TRW), Keesler AFB as this location offers the best opportunity to demonstrate the concept of a Wing-level approach to improving innovation within AETC. The 81 TRW has the necessary quality and quantity of resources to create a WIO. The selected Wing has a good representative cross section of the USAF and has a proven record of developing and managing innovation-related programs.

Group 3 came to this conclusion by initially addressing four fundamental barriers that stifle the creation and implementation of innovative ideas. First, they lack a central focal point for presenting their proposals. Second, innovation tools and programs are not adequately advertised to Airmen. Third, some Airmen who wish to submit ideas for approval are confused by a complex bureaucracy and never complete the process. Finally, the USAF culture disincentivizes innovation by encouraging a culture of consistency.

Group 3 proposes a Wing Innovation Office (WIO) to mitigate these barriers to innovation. Capitalizing on support from senior leaders, Group 3 proposes the WIO provide constant reinforcement of the CSAF vision at a level familiar to all Airmen. The WIO performs three core functions: education, facilitation, and coordination. First, the office teaches Airmen how to make

innovative changes by introducing problem-solving and critical-thinking tools. The WIO also advertises services that help Airmen navigate the bureaucracy to have their ideas approved and facilitates decision support for the commanders. Second, the office serves as the focal point for idea submission. Group 3 proposes the WIO have a dedicated staff to review and improve submissions. Subject Matter Experts (SME) and a representative from the Financial Management Analysis Office (FMA) validate proposed cost-saving estimates. The WIO routes submitted ideas to the appropriate decision-making agencies for their approval. The WIO is charged with finding and implementing creative solutions at the lowest level. Group 3 suggests the office also capture and provide feedback to the idea submitter and his or her supervisor. Third, the WIO must coordinate among Wing units to spread successful ideas locally and then report the results to the MAJCOM for dissemination to other Wings.

The Wing Commander must champion the WIO mission to highlight the value of innovation in accordance with CSAF intent. Group 3 proposes the Wing staff the WIO with a full-time Chief Innovation Officer (CINO) as well as two full-time staff members. The CINO should be an O-4 with strong leadership credentials and experience in Commander Action Groups (CAGs), project management and instruction. Each Group and Squadron provides one representative to the WIO to serve as a SME on proposals impacting their organization. The WIO should solicit volunteers to serve as analysts and researchers to further promote a culture of innovation and advertise the services of the WIO.

SECTION I: INTRODUCTION

The AETC Commander challenged the 14B SOS Think Tank to develop a WIO model to promote the USAF's larger lean initiative. Due to the current fiscal environment, the need for innovation is arguably more important than ever before. This task requires the USAF find ways to be more cost effective through innovation and apply the AFSO21 philosophy of "doing less with less" (ACC Homepage, 2014). While the concept of innovation in the USAF is not new, AETC has made a concerted effort to emphasize and implement lean initiatives. Based on its recent success, the AETC Commander tasked the SOS Think Tank to build on the command's lean consolidation efforts of pre-existing innovation programs. Group 3 investigated four barriers to innovation to include: lack of a central focal point, poor marketing and communication, bureaucratic inertia, and inadequate incentives.

SECTION II: BARRIERS TO INNOVATION

Intrinsic to the success of any proposed WIO is the ability to address the underlying barriers to innovation that exist within the USAF. The SOS Class 14A Think Tank narrowed the primary barriers of innovation or continuous process improvement (CPI) to four central concepts: lack of a single focal point of entry for idea development, inadequate advertising campaigns for current innovation programs, inconsistent grassroots incentives, and bureaucratic complexity (SOS 14A Gp 1, 2013).

The first of these barriers, the lack of a central focal point, is a result of a demand by the USAF to spur innovation at all organizational levels and across every career field. As a result of this emphasis, more than 20 innovation programs and offices have been developed. Examples of these programs include USAF Smart Operations for the 21st Century (AFSO21), Productivity Enhancing Capital Investment (PECI), Innovative Development Through Employee Awareness

(IDEA), Best Practices (BP), Defense Innovation Marketplace, and USAF Lessons Learned L2 Program (AFL2P).

The panoply of programs poses a challenge to innovation because it compartmentalizes and separates the tools of innovation. At present, Airmen with innovative ideas do not have a single point of contact to shepherd their ideas to the relevant Wing or MAJCOM program. There are multiple avenues of support for Airmen seeking financial validation of their ideas. Airmen also have no single focal point from which to find innovative ideas for implementation. Instead, multiple and sometimes cumbersome databases such as CPI-MT or Best Practices exist. Each of these tools can be helpful but they each assume that individuals are aware of them and how to use them. Airmen need a central focal point, such as a Wing Office, to guide them through the proper innovation channels.

The lack of central focus is not merely due to the number of offices or programs designed to handle innovation; the number of offices and programs that have overlapping functions also exacerbates the problem of focus. As an example, AETC initiated its Cost Conscious Culture (C3) office under Gen Rice as part of an effort to stimulate innovation and while the resulting program was effective, its functionality mirrors that of the IDEA and PECI programs. Each program supports productivity improvement suggestions, has defined commander paperwork and approval processes, provides unit/individual financial rewards for CPI initiatives, and supports the AFSO21 culture (31 FSS, 2014, ACC Homepage, 2014). Overlapping functions lead to a confusing lack of differentiation between avenues for idea submissions, which result in programs competing for resources and participants.

The Airman Powered by Innovation (API) program partially addresses the overlap issue by consolidating AFSO21, IDEA, PECI, and BP, but there are many programs left unconsolidated

(Draft AFGM, 2013, p. 1). The AFGM governing this consolidation notes that consolidation was considered necessary "based on a logical cause and effect assumption [that consolidation] would result in resource savings and/or improved mission performance" (Draft AFGM, 2013, p. 1).

The second barrier identified by the 14A Think Tank was the poor marketing and communication of CPI initiatives and programs (SOS 14A Gp 1, 2013). Broad public awareness is a key to success for any enterprise program and the same holds true for USAF innovation initiatives. A 2013 review of AETC's C3 initiative by Dr. Morin revealed a general lack of program knowledge among Airmen and was attributed to, "message not reaching frontline workers." Deficient unit-level knowledge has also been documented in other programs. At Dover AFB, for example, only 64% of units had an IDEA point of contact (POC) identified during the 1st quarter of 2013 (Guinn and Heaton, 2013, p. 2). AFMC bases have CPI POCs at each unit but there is evidence from interviews with innovation program participants that military and civilian personnel are not properly trained on CPI program procedures. For example, in one case a military member did not receive a financial award for a successfully implemented idea that saved the USAF over $10K due to poor understanding of the IDEA program requirements.

Innovation programs must be better advertised not only at bases but also in PME. A review of distance and residence courses in the 2012 - 2013 AU Catalog ranging from Airman Leadership School to Air War College to Enlisted Professional Military Education Instructor Course shows only one third of courses have any required material covering CPI related issues (Air University, 2012). This finding shows that there is room for improving the reinforcement of innovation and CPI. PME programs should be taken advantage of to advertise innovation given their valuable function of providing common education to all military members.

The USAF must also undertake public relation campaigns to emphasize the need and

support for innovation. These campaigns and the innovation programs they represent must advertise successful innovation stories to grow buy-in at the grassroots level. These campaigns must counter the negative perceptions of CPI programs generated from events such as shuttering the IDEA and PECI programs. The USAF must also counter the cynicism created by Airmen that see their approved innovation ideas ignored. For example, an Airman at Holloman AFB received approval for an idea to improve the efficiency of deployed vehicle maintenance, which was never implemented in his unit that had the potential to benefit from the idea. This individual shared his negative experience throughout the shop and unit, which indirectly caused other individuals to question their willingness to participate in innovation initiatives. Using advertising campaigns to generate a culture of innovation is critical for future success in the USAF.

The third barrier identified by the 14A Think Tank involved a need for consistent and valued incentives (SOS 14A Gp 1, 2013). The term incentive references both rewards and recognition; it can exist for both individuals and organizations. Incentives such as money, time off awards, career enhancement, and public recognition such as that provided by the C3 program should be maximized to encourage innovation.

Wing Commanders should encourage their subordinate commanders to maximize incentives for innovative military and civilians. A review of the 461 self-identified submitters for the C3 initiative showed that 55% were civilians and 45% were military. AFI 36-1004 provides time off and special act or special service (SASA) financial award options for civilian participation in CPI efforts (AFI 36-1004, 2009, p.13-14). These rewards are beneficial because they can be implemented faster and with far less coordination than rewards resulting from programs structured like IDEA and the proposed API (AFI 38-401, 2007, AFI 38-301, 2009). Recognition programs should be amended to more closely tie innovation successes with extrinsic reward systems. Such

rewards offer increased motivation for Airmen to buy into cost-efficiency initiatives.

Inflexible innovation program policies serve as disincentives that leave many potential money-saving ideas ineligible for reward. One example of this comes from a 574th AMXS maintenance shop, where a unique solution was found and implemented to increase the ability of maintainers to have ready access to tools. This not only promoted user-friendly processes, but also resulted in an off-the-shelf solution that saved the unit hundreds of man-hours. Unfortunately, the shop could not receive any reward for the solution in the IDEA program because they had already implemented the proposed changes prior to the idea submission, despite successfully saving the USAF over $10,000.

Another disincentive for innovation for personnel is the fear of innovating Airmen out of jobs. This disincentive was proposed by the Director of the Chief Learning Office (CLO) and is substantiated as a fear among Airmen in frequently asked questions of the ACC AFSO21 program (ACC Homepage, 2014). AFSO21 provides no assurances that this fear is unfounded and offers "reorganization" as the possible solution for Airmen displaced by innovation. At the lowest level, innovation exposes the unit to two additional risks: losing future funding if the innovation results in decreased expenditure of allocated funds and an increase in taskings that consume time or resources saved. In the current fiscal environment, however, Airmen must be good stewards of taxpayer resources and innovation is the direct mechanism to bridge this gap. Ultimately, the innovation office needs to initiate a cultural shift to combat misperceptions about redirected or improperly allocated funds.

The fourth and final barrier identified by the 14A Think Tank was bureaucratic complexity (SOS 14A Gp 1, 2013). The WIO can foster innovation by mitigating the size and complexity of the underlying USAF administrative structure. For example, the IDEA program demands that

ideas requiring a separate improvement process (SIP) be approved before they are processed (AFI 38-401, 2007, p. 10). There are over 700 SIPs, and approval for these can take several months or even years (31 FSS, 2014). Consequently, unlike the AFSO21 program where improvement events can last from days to months or PECI where funding can come in as little as 30 days, the total process time from innovative idea generation to IDEA program approval takes months or years.

TSgt Layman's experience submitting an idea to improve maintenance on Minuteman II safing pin doors provides a case study on several barriers, but particularly bureaucracy. TSgt Layman submitted a change to the tech order (TO) in Spring 2011 that involved using a new tool he designed to more safely conduct maintenance. The idea was submitted via an AFTO22 to the 20AF A4, and after going through some revisions and quantifying tangible benefits, it was eventually forwarded to Hill AFB for approval. At Hill, TSgt Layman's AFTO22 was combined with other suggestions into an AFTO252 form, and the entire package of updates went through a standard practice of multiple reviews to verify all proposed changes to the TO. Analysis showed that the tool had to be redesigned with Hill AFB engineers to accommodate updated specs and the tool and pin replacement method were finally published in an updated TO on 10 June 2013. The total time from submission to implementation was more than two years.

TSgt Layman's experience also uncovered how bureaucratic barriers can involve funding. In their attempt to verify the tool design, Hill AFB employees were stymied in their effort to find who would pay for the new tool. Funding issues in this example may be attributable to improperly trained employees but finding funding to implement innovations is a problem that has vexed even established innovation offices and programs. As an example, the CLO has expressed frustration with finding money using the program objective memorandum (POM) process when it has no innovation savings offsets to offer. PECI used personnel and procurement offsets in future years to

create a self-sustaining fund programmed into each year's POM. First, the process is flawed, because this compensation does not necessarily represent true savings by cutting personnel or procurement. Second, according to Mr. Mark Patoka of AF/A1MR, the primary PECI point of contact, some organizations could use funding for innovation but have no offsets to offer and because individual programs are competing for money, "individual programs do not support [a] PECI offset 'peanut butter' approach." These examples show that if innovation is a priority of senior leaders, an "innovation wedge" must be forced into the POM process to provide consistent annual funding to help implement the cost-savings innovations the USAF desires.

In summary, the USAF faces various obstacles in its drive for innovation. The large number of innovation programs and offices, lack of education and awareness, inconsistent application of incentives, and the USAF bureaucracy must all be mitigated to establish a culture of dynamic innovation. A bold step in directly addressing many of these challenges is the creation of the WIO.

SECTION III: WING INNOVATION OFFICE FUNCTIONS & METRICS

The WIO aims to remove the four barriers to innovation by adopting three main tasks. First, the WIO develops and executes an education campaign for Airmen at all levels in the chain of command. Second, the WIO becomes the focal point for idea creation, refinement, submission, feedback, and follow-through. Third, the WIO coordinates internally across the Groups within the Wing and externally with the MAJCOM to promote and distribute successful ideas. These tasks are guided by a clear vision statement and actively supported by Wing leadership.

The proposed WIO Vision Statement is: "Build and maintain a Wing culture that fosters innovation from conception to implementation." The VCSAF developed the API program to increase the effectiveness and efficiency of the USAF by harnessing and implementing "good ideas" provided by Airmen. The WIO is the Wing-level resource necessary to make this initiative

a success. API recognizes that the operational Airmen are the primary source of quality ideas. As such, the Wing must ensure Airmen work in a climate in which they feel their ideas are valued and in which they are able to easily submit them for consideration. These actions create a climate of meritocracy where every idea is considered equally. In other words, the process removes any rank or position bias prior to submission. Such a culture can only be attained by establishing the WIO with a clear and concise vision and by providing sincere support from Wing-level leadership.

The WIO Vision Statement aligns with the USAF Vision Statement but provides a specific goal achievable within a single Wing. The intent is for innovation to become a way of life in the Wing. Airmen must feel comfortable suggesting ideas that change long-standing practices to their superiors, and those ideas must be rigorously reviewed and sensibly implemented. Leaders must be willing to take risks on new processes that potentially increase mission effectiveness or offer long-term savings, even when those ideas require additional resources to launch.

Senior Wing leaders must fully support innovation in order to sustain such a climate. Indeed, such support is openly encouraged by the VCSAF. The WIO should report directly to either the Wing Commander or Vice Wing Commander. Commanders must become more than simply figureheads in order for the office to successfully support a climate of innovators; commanders must actively advertise WIO services and promote the submission of ideas. The proper incentive structure will not only encourage participation, but will also drive an idea-stagnant Wing climate towards one in which innovation is habitual.

One of the critical functions of the WIO is to train unit members about innovation techniques, tactics, and procedures (TTPs) and promote awareness of existing USAF innovation programs. This function was previously discussed by SOS 14A as “force management” (SOS 14A Gp 1, 2013, p. 22) and mitigates the advertising barrier to innovation. Lack of training on

innovation TTPs is an issue in both the corporate and military world (SOS 14A Gp 1, 2013, p. 11). AFI 90-201 2.20.10 requires units to use problem-solving tools to rectify deficiencies on inspections. The training function enables both decentralized innovation by empowering Airmen with tools as well as "push-pull" innovation support by ensuring Airmen know what capabilities exist to help move their idea forward (SOS 14A Gp 1, 2013, p. 16).

The WIO should serve as the commander's hub for effectively educating Airmen about innovation tools. The USAF already has several TTPs utilized at the unit level to include AFSO21, the tactical debrief process, and the strategy-to-task model (SOS 14A Gp 1, p. 22). The WIO should maintain and execute a Wing-level training syllabus on the use of these tools. The goal should be 100% contact across the Wing in an effort to avoid mandatory training, which runs counter to the concept of innovation. Additionally, this strategy enables the WIO to maximize honest participation and optimize buy-in at the grassroots level. The outreach effort will cover existing innovation programs such as the API program, AFSO21 advertising, the Tactical Debrief Root Cause model (cf. USAFWS Academics), a sketch or case study of an innovative airman from the service's history, and the functions of the WIO and how it can help.

The WIO advanced Wing Innovation Awareness Course will consist of approximately a day of academics. This course should ideally be taught to at least one member in each flight within the Wing to empower structured problem solving at the lowest echelon. This course will combine the formal two-hour AFSO21 Basic Awareness class (AFSO21 Playbook, 2008, C-11) which will certify participants to participate in a CPI event, a two-hour module on the Tactical Debrief Root Cause Analysis Tool based on USAFWS academics, two half-hour case studies of innovative Airmen, one hour in-depth review of existing USAF innovation programs, and two hours of hands-on practice.

Additionally, the WIO will coordinate the one-week AFSO21 Level One trainer upgrade course IAW the AFSO21 playbook as well as AFSO21 Level Two certification as required. The office can also coordinate other training such as industry visits and guest speakers.

Finally, the CINO should strive to maximize opportunities to get the WIO in front of the Wing's Airmen. Useful tools include, but are not limited to, an online presence, face-to-face contact with Airmen in their work centers, presentations at commander's calls, office calls for squadron and flight leaders, and visits to PME courses such as ALS. The ultimate goal is to foster a Wing culture that embraces innovation by ensuring that Airmen know the WIO is available to help, and by arming Airmen with TTPs that can be used to spur innovation at the lowest levels.

Measures of effectiveness (MOE) and performance (MOP) for the training and awareness function include metrics that capture understanding of the innovation process, contact with all wing members, innovation training, percentage of unit members that are able to identify pre-existing innovation programs, unit utilization rates, feedback participation rates, root cause analysis usage rates, and SME training quotas.

The second primary function of the WIO is to serve as the idea hub of the Wing. The WIO provides four specific services in support of this function: collect ideas, develop improvements, submit final proposals, and respond with feedback.

Idea generation and implementation begins with guidance from the MAJCOM, Wing, or subordinate commanders. Commanders are encouraged to create priority topics for innovation in order to focus Airmen innovation efforts on areas in which improvement is deemed a priority. Priority topics will receive streamlined processing by the WIO via pre-coordination with applicable functional offices and subject matter experts.

While small ideas must be encouraged, developed, and implemented at the lowest possible

level, some ideas require approval from a higher authority. The WIO eliminates the need for Airmen to search for a specific office related to their idea by serving as a focal point for idea collection. If in doubt about where to go with an innovative idea, an Airman may always approach the WIO for support. The Airmen will then be able to request help improving the idea to meet the standards for submission up the chain-of-command.

The best idea presented in the wrong language may never receive the attention it deserves. Another core service of the WIO is to identify merit in innovative ideas, mitigate drawbacks and risks, and refine language in preparation for review by higher authority. Part of this vetting process may involve rejecting ideas that are not ready for implementation. Experience reviewing and submitting many ideas from agencies throughout the Wing will help the WIO recognize those ideas that are likely to be successful.

Programs designed for idea improvement should be encouraged, but not required prior to idea submission. The WIO must not be a bottleneck for the development and implementation of quality ideas. Airmen with innovative ideas should not be restricted from submitting them to higher authority, although assistance from the WIO is intended to improve the quality of ideas at the lowest level.

As experts on the various programs concerning innovation and idea implementation, the WIO will assist Airmen in submitting polished ideas to the appropriate program or approval authority. Often, this will be to officers within the Wing. Considering and approving ideas at the lowest level should be a priority. This requires impact assessment at the Wing level.

Involving applicable SMEs and a representative from the Financial Management Office (FMO) in the submission phase is critical to identifying those ideas with the most promise and providing a proper impact assessment. SMEs will assess the mission impact of the idea and the

ease of implementation, while a qualified FMO representative will estimate the financial impact of the idea. The goal of this phase is to provide the approval authority with a projection of implementation timeline, probability of success, and return on investment. Innovation programs such as API dictate the appropriate authority level for proposal receipt, review, and approval. Approval authorities reside at or below the Wing level and will have access to the WIO for further guidance.

Those ideas that require approval at the MAJCOM level will be routed by the WIO to the appropriate staff agency. The WIO will serve as the single point of contact for responses to these MAJCOM-level submissions. This ensures the WIO is able to track both successful and unsuccessful ideas, identify trends, and provide critical feedback to idea submitters.

Previous programs were at best inconsistent in providing feedback to idea submitters, and at worst failed to respond to submitters at all. Feedback should be provided in three phases. Phase 1 feedback is immediate feedback regarding idea submission status. The WIO will provide Airmen with written feedback regarding the success or failure of their submissions. If unsuccessful, this feedback may provide Airmen with an opportunity to refine their ideas and resubmit. Alternatively, the feedback may inform Airmen that their ideas have already been attempted with little success or that their idea involves too much risk for immediate consideration.

Phase 2 feedback is an intermediate checkup on the status of the submission. Ideas submitted to Wing-level approving authorities should be reviewed monthly; those ideas submitted to MAJCOM-level approving authorities should be reviewed quarterly. Intermediate feedback should be continued until the ideas are either approved for implementation or disapproved. Both Wing Commanders and idea submitters should receive Phase 2 feedback.

Phase 3 feedback applies exclusively to approved ideas. Mr. A.J. Ranft, AETC Chief

Learning Officer, notes that the sustainment of innovative ideas is a consistent challenge. Phase 3 addresses this challenge by revisiting the idea one year following implementation. The CINO, accompanied by a SME and FMO representative, reviews the implementation of the idea, compares projected results with actual outcomes, and determines the resources required to sustain the innovative efforts.

Lastly, the WIO will identify Airmen who submit particularly noteworthy ideas. The WIO will forward the names of these innovative Airmen to Wing leadership for recognition. A quarterly award process for innovation should be established by the Wing CC and administered by the WIO.

Recognition of idea submitters is a service of the WIO but idea generation is not. The huge pool of Airmen working throughout the Wing serves as the primary source of ideas. The WIO simply improves the quality of those ideas, navigates the bureaucracy to present ideas to approval authorities, helps implement ideas at the lowest level, and provides feedback for future action.

Metrics permit the Wing Commander to evaluate the impact of the WIO as an innovative culture-creating entity and as a source for cost-reducing policy changes. Furthermore, per-capita measures allow the Wing Commander to compare innovation efforts with other Wings in the USAF on a common scale. Group 3 created two categories of metrics: effectiveness and performance. The MOE is designed to capture the Commander's subjective measures of innovation impacts across the base. The MOPs are meant to analyze the number of ideas collected by the WIO, refined by the WIO, and drafted into formal proposals via the WIO approval authorities, and the number of proposals returned to the idea originator with phased feedback. These metrics must also capture the average time from submission to implementation, return on investment over different periods of time, total savings (e.g. cost, man-hours, capability/year) from approved and implemented ideas, and per-capita return on investment per WIO member per year.

The WIO should also provide a quarterly Wing review of idea submissions, an annual MAJCOM report, a lessons learned document to units across the Wing, analysis of ideas passed to the MAJCOM, and problem-solving event updates.

Another critical function of the WIO is promoting coordination. This responsibility includes fostering crosstalk between functional areas within the Wing as well as coordination with outside entities such as Higher Headquarters (HHQ) or other Wings. This function has previously been referenced as the "Analysis and Integration Division" and is intended to break bureaucratic stovepipes (SOS 14A Gp 1, p. 21).

Within the Wing, the WIO should periodically bring together SMEs from different career fields and groups. This can be done as a formal CPI event under the AFSO21 umbrella, a regular meeting, or an "as needed" think tank to address commander priorities. Moreover, the WIO should publish a regular innovation journal (SOS 14A Gp 1, p. 23) of ideas submitted within the Wing so that Airmen can "piggy back" ideas off of each other (SOS 14A Gp 1, p. 21). The WIO should also seek opportunities to encourage crosstalk in a faster "OODA" loop; an example of this process in a tactical operations group context is simply placing the "lessons learned" derived from day one of an LFE at the operations desk for everyone to review before day two of the exercise. Finally, the WIO should coordinate with SMEs such as finance officers who are trained to calculate the impact of innovation.

The WIO should promote lateral crossflow of ideas by sharing with other units. Pending a technology solution, the easiest way to do this is to publish CPI Lessons Learned worksheets, AFSO21 "A3" worksheets, or debrief lessons learned in brief bulletins. For example, the 561st Joint Tactics Squadron models this type of approach with short "flash tactics bulletins." This approach can easily be adopted by the WIO. The MAJCOM role would simply be serving as a

repository for "flash bulletin" papers submitted by the Wings. Moreover, in addition to reading the papers submitted by other innovation offices, the WIO should feel free to reach outside the Wing and directly ask other CINOs how they have tackled various problems.

Finally, the WIO must coordinate with HHQ entities. Within AETC, the MAJCOM Idea Office and A8X make perfect liaisons to push resources to the unit level. The AETC Chief Learning Officer has identified MAJCOM involvement as critical for sustaining good ideas, especially if sustainment funding through the POM process is required and innovation savings offsets must be provided for obtaining money. The CINO should also coordinate high-level senior leader support, such as advertisements from MAJCOM leaders, "push" comments from visiting DVs, and "on the spot" recognition like a coin or public recognition from HHQ DVs for innovators. Lastly, the CINO must stay current with the SAF's programs such as the API program initiative (Draft AFGM, 2013).

SECTION IV: MANNING AND STRUCTURE

The next question to result from the 14A Think Tank proposal asked CGOs to consider manning recommendations for the CINO position and WIO staff. Group 3 assumed a zero-based manning construct based on discussions with senior advisors as well as documents from the previous think tank initiative. From these same papers and presentations, the group learned that prior suggestions for the CINO position included officers with Education with Industry (EWI) knowledge, requisite PME completion, confirmed selection to colonel, and Squadron command experience. Such qualifiers vastly narrow the pool of candidates without due consideration for enlisted, civilian, or contracting involvement so Group 3 decided to examine a different set of attributes for members of the CINO staff.

During discussions of possible functions for the CINO, the growing roles and

responsibilities associated with the position resulted in a broader set of requirements for personnel selection. The three primary CINO duties determined now place more emphasis on key leadership support at the Wing and MAJCOM levels than was previously outlined. Not only do individuals under consideration need a substantial working knowledge of all pre-existing innovation programs, but they also require the ability to effectively reach across organizations for education, coordination, and advertisement purposes. In order to identify the best individuals for the CINO position, the Wing needs to offer appropriate career progression incentives as well as ensure consistent support for the WIO from Groups, Squadrons, and units across the installation. Group 3 also endeavored to bolster the position so as to source a CINO that possesses a genuine passion for sustaining innovation. The team then looked to outline the structure of the office to better refine the soft and hard skills required of the CINO staff.

The office structure is a direct reflection of the three key functions assigned to the Innovation Office and begins with a MAJCOM-level support system. AETC leadership and the Wing Commander or Vice Wing Commander should act as champions for the program via advertisements, mass email origination, AFN media generation, and monitoring-controlling performance via metrics at the beta test base. The Wing leadership must provide oversight and reinforce innovation priorities through continued endorsement of the innovation programs, the WIO, and the various innovation processes. The Vice Wing Commander should provide initial supervision of the WIO and help cultivate ideas as well as present those early submissions to the Wing Commander to ensure the innovative ideas fall within the Wing's scope.

Clearly, the WIO will be an integral part of the wing and the CINO must be a qualified individual who can foster a climate of innovation throughout within the Wing and MAJCOM. The CINO should be an adept O-4 with a successful record of special project management preferably

sourced from a Commander's Action Group, business office, Tiger Team, pre-existing innovation office, or instructor cadre. The USAF-wide focus on innovation warrants a full-time Wing Staff Agency office to perform both administrative and duty-specific functions. Thus, the WIO requires at least two additional personnel who possess a full working knowledge of USAF-wide innovation programs pertinent to the Wing's mission. These additional personnel will be responsible for the education of all Wing units on innovation programs as well as the submission and follow-up procedures for all innovative proposals. The beta test base should source these individuals from pre-existing improvement programs on the installation and in the grades of GS-11 and E-7, respectively. In addition, each Gp/CC should provide at least one SME to work within the WIO in an attached role. Ultimately, the CINO is the primary coordinator and administrative control for the facilitators, educators, and dedicated SMEs.

The CINO and WIO need to bridge the divide between grassroots-level ideas and senior leader support in order to meet the intent of the CSAF innovation effort. Thus, the CINO is charged with the facilitation, education, and coordination of these efforts across both the Wing and MAJCOM. The WIO should utilize personnel from pre-existing innovation programs as well as unit-level volunteers in a long-term effort to consolidate duplicate improvement programs. Upon completion of the beta test, the concept of a CINO and WIO should prove flexible and valuable enough for implementation throughout the USAF.

SECTION V: BETA TEST SELECTION CRITERIA

Group 3 was asked to find and recommend an AETC wing at which to beta test the WIO construct. Specifically, the group needed to find a location with a good cross section of the USAF population to include active duty (AD), Air National Guard (ANG), and Air Force Reserve (AFR) civilians, officers, and enlisted. The group's intent is to build a model that can be implemented at

any base, much like a business model, which can adapt to the local resources available. The three major factors or criteria to consider in implementing the plan and evaluating which base would serve as an ideal beta test environment are cross section of the USAF, quality of resources, and quantity of resources.

The Total Force concept was presented as an example of a guiding principle to use for determining which AETC wing would serve as the ideal beta test environment for WIO. This determination must be made through the evaluation of several specific factors. First, the training and the PME conducted at a potential base must be considered. The variety of AFSCs available at the base must be considered to ensure a broad and diverse perspective on problem solving and innovation techniques. Some critical AFSCs used in previous innovation initiatives include financial management (FM), contracting, and engineering. The number or and type of supplemental courses offered at the base should also be considered in part because of the associated available SMEs and their respective experience in the USAF. Additionally, students and faculty at the PME and supplemental training course are a resource that should be considered to provide innovation inputs and analyze innovation suggestions. Casual status students and BMT graduates should have credentials to assist WIO manning in staffing and/or analyzing innovation ideas until they are reassigned. Second, the demographics of the number of tenant units, the AD, ANG, and AFR units assigned to the base should also be considered. Other demographics that should be considered include officer/enlisted ratios and the population of local retirees community and spouses because these people can also serve as potential resources. Ideally, a good beta test Wing will be able to tap into resources outside the Wing itself to find a true cross section of the AF to achieve diversity on problem solving and innovation techniques. In addition, if a test base is over or underrepresented in its ratio of AD/Reserve/Guard/Civilian Airmen, it will be difficult to

determine if the success or failure of the WIO is due to the implementation or due to this skewed ratio.

The quality of resources available at a base should be another factor when deciding on a base to beta test the WIO. The quality of resources is a subjective measure assessed by the Wing Commander when matching the specific base's mission requirements with the resources available. An AETC base that has a Non-Appropriated Funds (NAF) office can tap into information and resources that are not limited to appropriated activities. The experiences and business practices in the NAF activities can be shared with Appropriated Funds activities to resolve common issues. A MAJCOM or Numbered Air Force will also have more experienced personnel who may have had command positions and staffing expertise to route innovation packages for approval. A base that offers supplemental courses and PME students would provide another quality resource because of the students' background in a variety of career fields. The courses could offer an elective, similar to the Think Tank at Squadron Officer School, to enable the students to submit, analyze, research and take home innovations that they wouldn't have access to at their home station. Finally, tenant organizations could likewise provide a quality asset, which could be resourced for innovations and best practices that originated in other MAJCOMs or sister services.

An ideal beta test base would receive strong support from the Wing leadership, who would be willing to be the face of the program and give it legitimacy. Additionally, it would have a pre-existing culture of innovation. This base would best be manned through a volunteer leadership and participation process, where the commander selects from the volunteers based on their credentials and experience, and not based on their unit or current job. The commander should have a pool of FGOs from which an officer can be picked to lead the efforts in all the functions of the office and represent the innovation packages to the decision makers on behalf of the innovators. The

commander should be able to rely on the expertise in the manpower and personnel office from the AFSO21 training, and the FM experience in the wing budget office.

The quantity of resources available is also an important factor when deciding on an ideal test base because the base commander should not be put into a position of choosing between appropriately manning the WIO and accomplishing the mission. The commander should consider the total base population when considering what impact the WIO will have on the Wing. The commander can also supplement the staff with the casual status student and volunteer resources previously mentioned to reduce WIO overhead. Each Wing can also take a roster of private organizations that continually produce Airmen capable of leading teams on specific projects and events. Additionally, the Total Force (Active/Guard/Reserve) needs to be utilized and even incorporate the surrounding community of retirees and spouses that are available for the different functions of the office.

SECTION VI: WING INNOVATION OFFICE LOCATION & STAFFING SELECTION

The bases in AETC have a variety of resources available that can present opportunities and challenges that can make them more or less attractive during base selection. Consideration of the requirement for a cross section of USAF and the quality/quantity of the resources available is not enough to determine if the WIO will be a success or not. As stated in the USAF vision, a successful WIO will require innovative Airmen inside and outside of the office. The WIO model proposed can be adapted to any base so that the specific mission can be accomplished without hindrance by the functions of the innovation office.

To determine which base represents a good cross section of the USAF, data was gathered for the total number of AD, civilian, officers, enlisted, ANG, and AFR at AETC candidate bases. This data was then compared to an USAF-wide data that captured the same categories. The bases

with a statistical deviation of 20% from the USAF ratio were highlighted. Two bases had three of the four categories (AD, civilian, officers, enlisted, ANG, and AFR) within the deviation: Keesler and Sheppard (see Appendix A).

Data was also gathered to determine which Wing had the best quality and quantity of resources. To determine quantity of resources, data for the total number of AETC Wing authorizations were compared. The bases with the four highest authorizations were highlighted; Keesler was #5 on the list (see Appendix A). To determine that quality of resources, data was gathered on the C3 potential estimated savings compared to the goal, divided by the population of the Wing. Data was also gathered on the C3 participation rate, divided by the population of the Wing. Finally, data was gathered on the total number of AFSO21 green and black belt certified individuals on the Wing. Two bases ranked in the top three of these categories—Keesler and Altus, which were highlighted in red (see Appendix A). Keesler AFB, Mississippi was the only base to meet two of the three major considerations (cross section of the USAF, and quality of resources), and also has a higher than AETC average quantity of resources. Additionally, several other subjective criteria make Keesler a good beta test base.

Keesler AFB in Biloxi, Mississippi is the home of the 81st Training Wing, 2nd USAF Headquarters, 403rd Reserve Wing, and Keesler Medical Center. In 2013 it was the winner of the AETC C3 King of the Hill competition. The entire innovation submission program was directed by a SrA Amber H. Bell, and a working group of Airmen that would meet periodically. The 81 TRW/CC, BGen Patrick Higby, has reached out to the AETC CLO requesting assistance to improve innovation. The training group has an NCOA as well as Cyber Warfare, FM, Personnel, Weather, and Field Operations specialists complemented by a traffic schoolhouse filled with experienced staff providing supplemental and PME courses to students. The Medical Group and

medical center are training postgraduate residency programs for numerous specialties in the medical and dental fields of study. The tenant organizations of the reserve and 2nd Air Force also provide an outside perspective on Total Force initiatives and impact across tech training and flying operations. In addition, the base uses a compressed work schedule (CWS) for the instructor staff and students, allowing for a free Friday every other week. The base is surrounded by a large community of retirees that continually provide volunteer service in the medical center and around the base to support the mission. Finally, many of the spouses of the residency students and trainees volunteer for significant roles in base wide activities during the short time stationed at Keesler.

At Keesler AFB, the wing commander can enable Airmen to sustain the existing C3 program and transition the efforts into a formalized innovation office. By building on the successes of the CPTS/FM leading the C3 program, the Medical and Training Groups can provide analytical support to the innovations submitted. The students or faculty can select innovations that correlate with their career field and provide data, analysis, research and background on the problems or solutions proposed to the innovation office. For example the FM schoolhouse has a supplemental course that teaches cost benefit analysis and economic analysis. The students could select an innovation that was presented to the office and complete the research and presentation for credit during the course. The C3 working group can be used to staff the innovation packages to the corresponding decision makers for implementation and coordination. The CWS Fridays can be utilized to coordinate efforts for the multiple functions of the office, outside of the normal work schedule for the volunteer participants from the training units. With the current Wing Commander buy-in and visibility from the C3 program, the WIO could be a continuation of the C3 program which has already proven its worth in generating ideas for commanders' implementation.

SECTION VII: CONCLUSION

Group 3 recommends the beta test of a WIO take place at the 81 TRW, Keesler AFB and draw staffing from within the base populace. The WIO must overcome four specific barriers to innovation that resulted in the discontinuation of legacy innovation programs. The four barriers included lack of central focal point, poor marketing and communication of CPI initiatives, consistent and valued incentives, and bureaucratic complexity. Additionally, the office must seek to implement MOEs as well as MOPs to capture any momentum gained from the new flexible WIO model. Group 3 intends for this office to be run by an O-4 with support from two additional personnel. These individuals will perform the critical functions of educating leadership and wing personnel regarding innovation tools, facilitating ideas through the vetting and implementation process, and coordinating lessons learned both within the Wing and with outside entities.

APPENDIX A:

Background Data Analysis for Base Selection

Beta Test Selection Criteria

1. Best Quality Resources (Keesler & Altus AFB)
2. Best Quantity Resources (JBSA & Luke AFB)
3. Good Cross Section of USAF (Keesler & Sheppard AFB)

Best Quality Resources (Keesler & Altus AFB)

1. The number of AFSO21 Certified Personnel (Green/Black Belt)
2. Cost Conscious Culture (C3) Potential Savings & Participation Ratios

INSTALLATION	AFSO21 GB	AFSO21 BB	C3 Potential Ratio (Est Saving/Goal)	C3 Participation Ratio (Ideas Generated/ Authorizations)
JBSA Lackland	9	2	6.38	0.14%
Luke	5	1	1.70	0.66%
JBSA Randolph	14	6	3.06	0.63%
JBSA Ft Sam	5	1	2.22	0.70%
Keesler	2	2	15.11	3.40%
Sheppard	5	1	2.78	0.92%
Maxwell	9	1	1.09	1.36%
Altus	8	0	24.96	3.87%
Laughlin	1	1	2.35	1.20%
Goodfellow	2	0	3.00	3.73%
Columbus	2	1	11.11	1.55%
Vance	5	1	3.36	4.08%

Most Quantity of Resources (JBSA & Luke AFB)

The number of authorizations at the AETC wing

INSTALLATION	TOTAL
JBSA Lackland	7164
Luke	4427
JBSA Randolph	4121
JBSA Ft Sam	3835
Keesler	3468
Sheppard	2933
Maxwell	2492
Altus	2454
Laughlin	1828
Goodfellow	1582
Columbus	1487
Vance	1006

Good Cross Section of the USAF compared to USAF Standard (Keesler & Sheppard AFB)

1. Representative Ratio of USAF population (Officer/Enlisted)
2. Comparable Ratio of Total Force (Active Duty/Civilian/Guard/Reserves)

	% AD Officers	% AD Enlisted	% Civilian	% Guard/Reserve
Min	11%	45%	24%	4%
Max	17%	68%	36%	6%
Stan Dev	3%	11%	6%	1%
USAF	14%	56%	30%	5%

INSTALLATION	WING	CROSS SECTION OF USAF	INNOVATION RESOURCES	BASE AUTHORIZATIONS
Keesler	81 TRW	1	2	5
JBSA Lackland	37 TRW/59 MDW	6	3	1
JBSA Randolph	12 FTW/59 MDW/AFRS	3	4	3
Sheppard	82 TRW/80 FTW	2	9	6
Luke	56 FW	5	11	2
Altus	97 AMW	10	1	8
Goodfellow	17 TRW	4	7	10
Columbus	14 FTW	7	5	11
JBSA Ft Sam	502 ABW/59 MDW	12	10	4
Maxwell	AU/42 ABW	11	8	7
Vance	71 FTW	8	6	12
Laughlin	47 FTW	9	12	9

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