The Pursuit of Acquisition Intrapreneurs

Research conducted by:

Christopher E. Forseth, Major, USAF
USAF-MIT Lean Aerospace Initiative Fellowship
2001 -2002

Research support by:

Eric E. Rebentisch, Ph.D.
Center for Technology, Policy, and Industrial Development
Massachusetts Institute of Technology

77 Massachusetts Avenue
Room 41-205
Cambridge, MA 02139-4309

Executive Summary

   This report represents research conducted at the Massachusetts Institute of Technology under the Lean Aerospace Initiative (LAI) program. The research focused on identifying *Acquisition Intrapreneurs,* viewed and defined for the purpose of this research as, *individuals <u>within</u> the acquisition profession who take direct responsibility for turning ideas into products through assertive risk taking*. The basis for this research stems from the agile acquisition push for "breeding innovators" to achieve a leaner and more responsive approach to the design, build, test and fielding of warfighting systems. Two questions were asked:

> ➢ Are innovators real and recognizable in the acquisition field?
> ➢ Can innovative/risk taking members be effectively rewarded?

  A comprehensive survey was conducted and asked the acquisition workforce to respond to a number of statements regarding their current jobs, opportunities for advancement, future job interests and supervisor. Over 340 respondents, from 37 organizations identified by Air Staff, provided data from units representing each major product center--including research labs, air logistic centers, flight test centers and large and small development programs   Many group behaviors, by current job title and rank, were observed and identified *who is* and *who isn't* postured for change and increased risk taking:

> ➢ Who is: *Program Contracting Officers (PCOs) and Engineers*
> ➢ Who isn't: *Program Managers and Company Grade Officers (CGOs)*

   Short term recommendations for increased innovation include specific funding and reporting for PCOs and engineers. A long term plan to develop future acquisition leaders, CGOs, is proposed through a framework called JETS--the right agile acquisition <u>J</u>obs, <u>E</u>nvironment, <u>T</u>raining and <u>S</u>upport. This recommendation includes operational tours, an environment of failure-tolerant leadership, localized training through base-level Acquisition Center of Excellence offices and a rewards structure similar to the operational "W", or whiskey slots. The proposal tied the survey results and research theories together by providing a system to recognize, train, track and reward acquisition intrapreneurs.

Research Goal

A tremendous amount of attention has been placed on agile acquisition and transforming Air Force procurement as a means to faster delivery of warfighting capability. While significant policy changes are well under way, including AFPD 63-1 and the DoDD 5000 series, the development of acquisition professionals to lead this charge is still on-going. Achieving significant reductions in the time to field systems, starting with the spiral development of pathfinder programs, will require a concerted effort to identify leaders that can make this revolutionary change happen. If the objective to "field today's technology today" is to be met, the human element of this transformation must be effectively addressed. To this end, the following report will discuss short and long term proposals to recognize, reward and retain future acquisition leaders. The overall goal is to recommend career management solutions that will enable increased innovation and risk taking in an agile minded Air Force.

Background

This report represents research conducted at the Massachusetts Institute of Technology under the Lean Aerospace Initiative (LAI) program. The basis for this research stems from the agile acquisition push and a Corona briefing in the fall of 2001 by SAF/AQ. The Corona briefing highlighted an initiative for "breeding innovators" to achieve a leaner and more responsive approach to the design, build, test and fielding of warfighting systems. The initial approach taken for this effort was to ask two questions:

- ➢ Are innovators real and recognizable in the acquisition field?
- ➢ Can innovative/risk taking members be effectively rewarded?

Research Method

The research started with an extensive review, over 60 articles and books, of literature regarding innovation, risk taking, the experimental environment and leadership models that support change. The advantage of conducting this work at MIT was unequaled access to renowned leaders in business and academic circles. Guest lectures from corporate leaders at

Ford, Delta Airlines, CitiGroup, Dell Computers, General Electric, Boeing and many others provided valuable insight into their company's corporate culture and how they leverage innovation for future growth. With the literary search and corporate snapshots as a point of departure, the research focused on answering the initial two questions by identifying *Acquisition Intrapreneurs.* Viewed and defined for the purpose of this research as, *individuals <u>within</u> the acquisition profession who take direct responsibility for turning ideas into products through assertive risk taking*. The construct of the research was to identify a profile of these individual (personal characteristics, motivators and rewards) including where in the acquisition ranks they may reside. An overview of the research flow is depicted in Figure 1 and indicates the initial inputs to the development of an Acquisition Intrapreneur profile. From this profile, a survey was composed with the assistance of many Air Force survey experts. The survey release was conducted with the support of Air Staff, which helped by identifying 37 organizations to participate in the survey.

Figure 1: Research Flow Chart
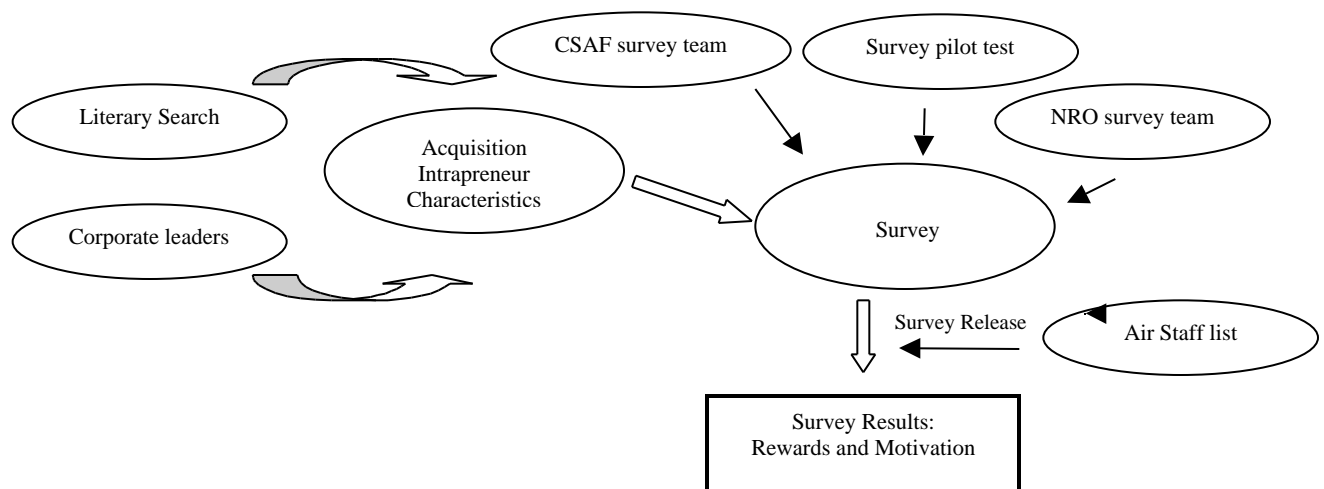
The research centered on a comprehensive assessment, the acquisition intrapreneur survey, that asked the acquisition workforce to respond to a number of statements regarding their current jobs, opportunities for advancement, future jobs and supervisor. A six point Likert scale (ranging from strongly disagree – 1 to strongly agree – 6) was used for each question. Many of the questions used in the survey, though modified for this research, had been used by MIT's Sloan School of Management in support of the many government and industry organizations.

The survey was pilot tested in May 2002 by acquisition professionals at Hanscom AFB/Los Angeles AFB and behavioral science experts at the United States Air Force Academy to ensure participants could understand each question and provide reliable responses. Additionally, survey teams at the National Reconnaissance Office and CSAF Climate Survey team at Randolph AFB were approached and provided assistance in the survey. This research survey contained two questions that were on the 2002 CSAF climate survey. A copy of the 50 question Acquisition Intrapreneur survey can be found at Appendix A.

Responses were collected over a 5 week period, starting on 20 Jun 2002, with the survey available on-line through a web address hosted on MIT's LAI server. Specific organizations were targeted to take part in the survey. These organizations were identified by Air Staff as units which had demonstrated varying degrees of innovation in their respective efforts and represented each major product center--including air logistic centers, research labs, flight test centers and large and small development programs. Each of these organizations were contacted via email and given the opportunity to participate. The survey was open to all members of the organization including active duty military, civil service employees, and unit contractor personnel. There were over 340 responses to the survey.

The Research Design

An assumption in the research is that individuals pursue risk opportunities (motivated) by the understanding that they will be rewarded for such efforts. In other words, rational people do not assume risks without the prospect of a return. These rewards may be reflected in promotions, bonuses, increased work autonomy, or future job opportunities. A profile of the motivations and rewards structure for intrapreneurs, as compared to traditional managers, is identified in Table 1. As you can see, the characteristics and factors that may influence their behavior are significantly different.

Table 1: Traditional Managers and Intrapreneurs Characteristics

	Primary Motivators	Activity	Risk	Failure and mistakes	Decisions	Who they serve	Relationship with others
Traditional managers	Promotion and corporate rewards such as office staff and power	Delegates and supervises	Careful	Tries to avoid mistakes and surprises	Agrees with those in upper management	Others	Hierarchy as basic relationship
Intrapreneurs	Independence and the ability to advance in the corporation	Direct involvement	Moderate risk taker	Attempts to hide risky projects until ready	Able to get others to agree to help achieve dreams	Self, customers and sponsors	Transactions within hierarchy

The survey was designed to assess the characteristics of current acquisition workforce members and identify courses of action to motivate acquisition professionals towards increased risk taking and innovation behavior. The manner in which the acquisition workforce is motivated to take risks is directly related to the likelihood and type of rewards an individual may receive. The interrelationships between responses in the survey's four sections (current job attributes, career and advancement opportunities, future job interests and supervisor) provides the basis for an assessment of the current workforce, suggestions for increased risk taking in the short term, and a proposal for the development of long term workforce innovation. Figure 2 highlights the three areas this report will address.

Figure 2: Report Highlights
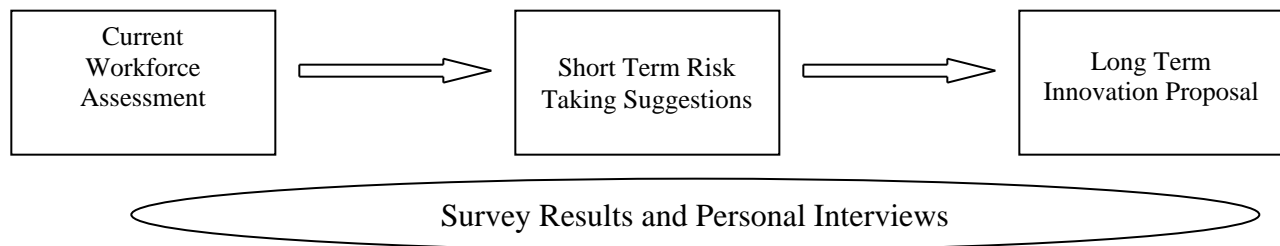
Current Workforce Assessment

The survey responses were analyzed using a comprehensive statistical software system called SPSS. The software provided a factor analysis of the results. Factor analysis helps unravel and understand the interdependencies of survey answers by identifying clusters of common responses. These clusters or groups indicated the tendencies people have towards a common response. For example, one group of respondents tended to characterize their preference to work as being *technically inclined*. Another factor score indicated a group showing an affinity towards *programmatic risk taking*, including taking action to improve program contracting terms and acquisition policies and instructions. Factor scores were calculated for each respondent and helped identify their tendency to a common response. Factor scores were used as the basis for much of the analysis in this report and are represented in the following tables.

The survey measured risk taking from responses to 12 questions that asked such things as "I spend part of my time trying new approaches so that my project can reduce costs," and identified three primary risk taking modes. Table 2 indicates risk mode verses the acquisition groups that identified with that particular response. A plus (+) indicated agreement in that area based on a factor score greater than 0.20, a (-) indicates a negative association in that area and a factor score of less than -0.20. An area left blank indicates little association to a risk category.

Table 2: Risk mode versus Job Title and Rank

Risks Modes	Program Managers	Program Contracting Officers	Engineers	Logisticians	Field Grade Officers	Company Grade Officers	Civil Service Members	Support Contractors
Te*chnical risk taking,* includes risk taking to improve schedules, technical solutions or system design		-	+			-		
Programmatic risk taking, includes risk taking to improve contracting terms, program funding or acquisition policies		+	-	-	+			
Risk taking environment, organization challenges members to find better ways of doing business								+

Note: Operators and enlisted members responded in insufficient numbers to support specific findings

The observations from Table 2 indicate a few summary findings. In some cases, the results are what might be expected. For example, engineers show more affinity to technical than programmatic risk taking and the opposite for program contracting officers (PCOs). Surprisingly, responses from program managers (PMs) and civil service groups show no association with any of the risk modes. Additionally, the only group that indicated an affinity to a risk taking environment was the program support contractors. The company grade officers (CGOs) actually indicated a negative association with technical risk taking. On the surface, this would seem to be a group inclined to exhibit one of the risk modes.

There were 15 questions on the survey that asked individuals to assess their career and advancement opportunities. These were viewed as *rewards* and asked questions such as "ultimately, the AF promotion system rewards innovation and risk taking," and "opportunity for promotion is directly tied to my current job performance." These questions dealt with things that

were important to different groups, shown at Table 3, and identified 6 areas. The same factor analysis scores (0.20 and -0.20) were used to determine whether a group indicated an association or disassociation with a particular area.

Table 3: Rewards versus Job Title and Rank

Rewards:	PMs	PCOs	Engineers	Logisticians	FGOs	CGOs	Civil Service	Support Contractors
Promotion system working as advertised		+		-	+			
Stability, my family comes first		-						
Bonuses				-				
Promotion based on risk taking	-	+			-	-	+	+
Credentials					-			+
Challenging projects		-	+					

Note: Operators and enlisted members responded in insufficient numbers to support specific findings

These observations continue to identify common group behaviors. The PMs, which in the previous risk areas showed no affinity, now indicate a negative association to promotions based on risk taking. The civilian service members, who also showed no affinity to a specific risk area, now indicate an association to promotion based on risk taking. Support contractors indicate a response that views promotion based on risk taking and credentials as important. PCOs and FGOs both indicate a desire for the promotion system to work as advertised but differ in their views of promotion based on risk taking. CGOs continue to indicate a disassociation with risk taking.

The final set of factor analysis looked at 14 current and 9 future job questions. The questions asked such things as "my acquisition training has exposed me to a wide range of different approaches to addresses the challenges I face in my job," and "to advance in the AF towards a program manager position." These questions were composed to identify current and future job interests or *motivators*. The factor analysis identified 4 current and 3 future groups and is presented in Table 4 below. Current motivators are listed in the first four rows, future jobs in the next three rows. Factor score cut-offs and demographic group comparisons are the same as those used in the previous tables.

Table 4: Motivators versus Job Title and Rank

Current/Future Motivation:	PMs	PCOs	Engineers	Logisticians	FGOs	CGOs	Civil Service	Support Contractors
Present work provides an opportunity for innovation						-		+
Present work provides a challenge				+		-		+
Unmotivated, feel the acquisition "system" determine outcomes				+	-	+		
Autonomy			+					-
Future promotion oriented positions		+						
Future PM jobs	+					+		
Future technical jobs			+			-		+

Note: Operators and enlisted members responded in insufficient numbers to support specific findings

The results in this table help close the loop between rewards and motivation among the different demographic groups. This supports the previous findings of a lack of recognition for rewards and risk taking in the CGO group. PCOs are motivated by promotion opportunities which were also observed in the rewards section. PMs are primarily interested in remaining program managers. Engineers indicate an affiliation toward technical positions and autonomy. FGOs were the only group disassociated with the feeling that the acquisition system predetermined outcomes. Support contractors identified, as they did in the risk section, with an innovative current environment. CGOs feel as though the system outcomes are predetermined and are not only unchallenged by the job but do not observe opportunities for innovation.

Additional notes. Other demographics examined include the number of programs an individual had worked and the percentage of those that were classified efforts. Though the number of programs worked did not indicate a greater affiliation to the risk taking modes, those who had had spent between 40 and 80 percent of their careers working classified programs indicated an affiliation with the risk taking environment mode. Also examined, but not included in the tabular results, were responses to supervisors. Though supervisors received positive responses across the spectrum for encouragement and support in providing an innovative environment, those efforts did not translate into the risk taking environment mode as might have been expected.

<u>Survey Bottomline</u>

Who are the active experimenters and best aligned to lead increases in risk taking and innovation efforts? One additional piece of evidence helped identify these groups and involved responses the question "I spend part of my time trying new approaches…" Those who answered <u>strongly agree</u> observed an affiliation to each of the risk modes. The results were consistent with the other factor analysis sections and indicated *who is* and *who isn't* taking risks:

> Who is: *PCOs and Engineers*
> Who isn't: *PMs and CGOs*

An individual can certainly fall into more than one group. For example, a CGO can be an engineer, logistician or even program manager, but the groups, as a whole, observe the tendencies identified in the analysis. As proposals for short and long term increases in risk taking and innovation are presented, it is done at a group level. In doing so, the effect of any recommendations, across more than one demographic group, will have the opportunity to include more individuals in the final solution. Before proposals for short and long term agile acquisition are proposed, a view on how organizational learning and cultural change can be pursued will be discussed.

<u>Learning and Survival Anxiety</u>

According to Edgar H. Schein, a world-renowned expert on change and professor emeritus at MIT's Sloan School of Management, few organizations are truly successful in reinventing the way they do business. He states that organizations fail to get past the point of challenging deeply rooted assumptions and processes; in the end they never think and act in fundamentally different ways. (1) In Air Force terms, this equates to nothing more than making heading checks on pre-filed flight plans. To fly completely different flight plans or new aircraft, an organization, as Schein subscribes, must undergo transformational learning. For this to take place and provide the catalyst to agile acquisition reform, the elements of *survival anxiety* must be greater than the fear of the *learning anxiety*.

Learning anxiety is being afraid of doing something new or different and contributes to an organizational resistance to change. Survival anxiety is the fear of lost jobs or rewards by the

organization's failure to change. Both factors contribute to the ability to motivate acquisition professions to unlearn the way business is presently done and embrace the tenets of agile acquisition. From Schein's years of consultation with Fortune 500 companies, options for change can take one of two forms: lowering the learning anxiety or increasing the survival anxiety.

Many companies elect to take the easy path and raise the survival anxiety, but the road to ingrained cultural change, according to Schein, requires the lowering of the learning anxiety. This can be done by encouraging and accepting risk taking failures and is discussed further in the *failure counts* section of this report. With the focus on agile reform, the levels of learning and survival anxiety in acquisition programs will increase. Ultimately, the challenge to Air Force leaders will be to encourage the innovators, or acquisition intrapreneurs, to pursue opportunities and not get into a mode where experimentation and risk taking take a back seat to a simple tweaking of the system. Companies such as 3M, Dell, IBM and GE have successfully established a culture that accepts change and innovation by keeping learning anxieties low and recognizing the contributions of experimentation and risk taking in their workforce. This has been achieved, in most cases, by active and consistent involvement by their corporate leaders. Schein's thoughts provide an interesting backdrop for the following short term career management proposal.

Short Term: The Risk Taking Focus

The difficult period for agile acquisitions will be the next 36 months, as pathfinder programs and spiral developments attempt to drive innovation into their acquisitions. If the mission is to rapidly deliver affordable, sustainable capabilities that meet warfighters expectations, then changes to acquisition guidance and policy directives may deliver the short term solutions needed to meet this mission. Unfortunately, it may take more than policy changes to meet these challenges. The survey indicated acquisition individuals who had worked in classified programs reported a higher rate of experimentation than those who had not. The policies and instructions for Air Force acquisitions apply equally to classified and unclassified activities, so the differences may not be in the guidance but in the individuals or the reduced oversight environment in which they operate. The point of the observation is that reducing the number of

regulatory constraints may not provide more risk taking and experimental behavior without motivating acquisition members.

The members that show the highest propensity for immediate action in the transition to an agile workforce are engineers and PCOs. Engineers were both motivated by autonomy and challenging projects, and report that they are adequately risk trained. PCOs indicated they are motivated by advancements based on risk taking and promotion-oriented future jobs. As different groups, they appear postured for increased experimentation. Though program managers, along with system program office directors, are arguably the most influential members of the program offices, the survey also indicated they may be the least willing to accept and pursue aggressive changes in direction. They are positioned, trained and rewarded under a system now under attack by senior Air Force leaders for losing credibility and failing to provide timely warfighting capability.

Suggestions for short term action include using Schein's framework for addressing learning or survival anxiety. Working the survival side of the equation, program funding could be withheld and innovations mandated as a means of satisfying shortfalls. Even if program schedules were held, little evidence from the survey indicates that incentives for change exist. This was stated in many write-in comments where funding shortfalls were identified as already an element of the current acquisition climate.

A more constructive suggestion would be a focus on reducing the learning anxiety and pushing risk taking by increasing funding control to PCOs and engineers, specifically for experimentation. By creating more funds, earmarked specifically for contract and technology experimentation, a building-block for organizational learning can be established. Insufficient funding was identified in the interviews and write-in comments as one of the leading barriers to increased experimentation. A commitment to experimental funding demonstrates a willingness by leadership to start and sustain the innovative journey. PCOs should use these funds to explore and push the envelope on the types of incentives and contracts they can write to deliver systems faster. Funding which supports collective risk relationships with the developers of our warfighting systems is critical to "quick turn" agile acquisition successes. Engineers should focus on engineering change proposals that can positively affect the timely delivery of systems. More funding administered at the working level, and not held as management reserve, should drive experimentation into the programs.

Program managers can become a part of the experimental outlook by including these innovation efforts, both success and failures, as a part of their program reporting and program budgeting. The short term focus should remain on the contractual and engineering side of the program, but given the collaborative nature of Air Force acquisitions, any net reductions in learning anxiety has an opportunity to be reflected across the program. A key part of this short term proposal for risk taking by PCOs and engineers is the reporting of experimentation failures. This is not about embarrassing or singling out poor performers, which is the view of some members and an element of the risk aversion tendencies today. Failure is simply the way innovators learn and ultimately succeed.

<u>Why Failures Count</u>

Do you remember the first or last time you failed? Chances are you probably do, in fact, you probably learned a great deal about yourself and the situation in which the failure occurred. We learn a tremendous amount through our failures. One of the reasons some parents involve their children in sports at an early age is because it provides an arena for effective and controlled failure. People can't win without the possibility of failure. Sports allow this to happen, you learn to win and you learn to lose—it's part of the game. Many believe those who participate in team sports are more likely to succeed later in life because they are not inhibited by the fear of failing.

The same principle applies in the development of long term agile acquisition solutions. Authors and behavior scientists Richard Farson and Ralph Keyes believe that failure-tolerant leadership is an integral part of innovation. [2] They quote IBM's revolutionary leader, Thomas Watson who once said "the fastest way to succeed is to double your failure rate." Leaders of world class companies understand and accept failure as a part of the risk taking and inventive process. Farson and Keyes explain that failure-tolerant leaders take an active role and become the champions of innovation taking place in their organizations. They understand and engage with the individuals involved in the risk taking ventures. They listen, give feedback and work to break down the social and bureaucratic barriers that inhibit organizational learning. They are open and discuss their own mistakes. Fault-tolerant leaders move toward future successes by analyzing the factors that contributed to project failures and make "smarter mistakes" the next time.

11

The operational Air Force uses this philosophy with the myriad of exercises they conduct, including Red Flags, JEFX, Ulchi Focus Len and a host of others. The operators exercise and experiment the way they plan to fight and, at the end of each day, review the success and failures on their scorecards. They push the systems, tactics, people and doctrine and learn from their mistakes. Agile acquisition players must learn the same lessons about experimenting and being open about the failures associated with trying something new and innovative; ingrained cultural change requires it. While fault-tolerate leadership (including the user community, Air Staff and Congress) and the reduction of learning anxiety are significant parts of the agile journey, they represent only part of the effort required to recognize and support an acquisition intrapreneur end state.

Long Term: the Acquisition Intrapreneur end-state

The development of intrapreneurs and a culture of innovation typically requires 5-10 years in large corporations to fully implement. As such, CGOs, a group that "scored" some of the lowest marks in the research, are the population to influence and prepare to be the future leaders. The long term suggestions in the remaining sections target these acquisition members. CGOs represent the best opportunity to develop an innovative workforce for tomorrow's Air Force. Recommendations center on a CGO proposal called JETS, the right agile acquisition Jobs, Environment, Training and Support.

J - The Right Jobs

Many CGOs feel lost in their initial acquisition tour, experiencing missed job expectations. In most cases, they're engineers directly out of school, on their first tour of duty, and are exposed to a situation far removed from the operational world they must deliver warfighting systems to. They bide their time, take the required training courses and learn the programming and planning aspects of the job. What can be done? A simple suggestion is to start all acquisition members in an operational tour and not in program offices. Some advanced, highly specialized research may still need fills from those directly out of school. Most officers, however, would benefit, and have expressed a desire, from a two year assignment for instance in aircraft maintenance,

12

security police, aerospace expeditionary force augmentation or flight operations support. Such initial assignments provide first hand exposure to the terms, skill level, challenges and environment of the personnel that operate and sustain Air Force systems. This field background gives future acquisition officers an opportunity to identify directly with the warfighter by being one! The former director of a Headquarters' personnel staff adds, "we found the best way to retain junior officers is to get an operational tour under their belt." During the interview, this senior officer further explains that, after spending an initial tour in a program office most officers make one of two choices: get out and take the money or stay in the acquisition community for the remainder of their careers. The director cautions significant recruiting and training issues might result if the initial program office placement of CGOs is completely turned off; but options to the problem exist. A phased approach that utilizes increases in authorizations for support contractors (an innovative group from the survey responses) or reserve officers in temporary positions are a couple of solutions. As indicated in the responses, too few young officers are challenged or able to make an early connection to the warfighting community they must learn to support in an agile environment. This is a "must change" for long term acquisition intrapreneur success and will require courageous decisions by acquisition career management leaders.

"I have personally sought opportunities to serve in an operational sense, but am limited by my AFSC (62)"
    CGO survey respondent

"…the first part of a young officer's career in acquisitions, they are doing snacko and powerpoint chart building duties. Not exactly a way to motivate an individual to stay and contribute for the long career."
    CGO survey respondent

E - The Right Environment

   The right environment starts with failure-tolerant leadership and support for taking more risks. As the experimentation efforts in the short term gain momentum, based on funding increases for PCOs and engineers, a shift to collaborative risk taking by the entire acquisition team is needed. The risk taking must extend across the enterprise to project managers, logisticians, civilian service members and the rest of the acquisition program personnel. The crucial part is active participation by leadership. From senior Air Force leaders, through the program office directors and down to the functional area members, the environment must represent a flat organization where teamwork, mentoring, trust and the cross-fertilization of ideas are encouraged. Funding, conservatively established at 5 percent by innovative companies, must be strictly set aside for experimentation.

"…only when the users truly need something do we embrace risk and take action"
    Civilian survey respondent

13

The experimentation efforts should be visibly supported and encouraged by the program office director (including one-on-one mentoring and involvement). Similar to knowing the Air Force core values, an acquisition member should understand how much of the budget is being spent on experimentation, what are those efforts and what have been the top 3 failures experienced as a function of taking some risks. One way to get those items ingrained in the organization is

"...by challenging the system and looking for ways to provide the user with better capability, you run the risk of not being a team player."
CGO survey respondent

making it a part of the normal reporting of program updates "up the chain". Ensure the program offices highlight the shots being taken and the lessons being learned. The failure-tolerant leadership and environment runs across the grain of an Air Force "we can make anything happen" attitude, but is critical to a long term vision which supports risk taking and innovation in an agile acquisition environment. It's the Red Flag opportunities for acquisition members.

T - The Right Training

Training in an agile acquisition workplace includes a focus on developing an acquisition entrepreneur's experimentation and risk taking skill set. The primary means of understanding what is needed to get the job done in many program offices is through informal, on-the-job training. Though this style is helpful in getting an individual "up to speed" in the office, it does little to provide the tools needed to change the status quo. Though many Defense Acquisition University courses are available, few have been built based on the elements of agile acquisition and must now include innovative concepts for a rapid fielding approach to acquisitions. As the Air

"...better training for officers...when I began my acquisition career I had no clue on what I needed to do."
FGO survey respondent

Force looks to evolve training programs, the research would indicate a training program conducted at the base level for each acquisition installation. The training might utilize the unique aspects of the program offices, laboratory or research areas that are contained at those geographic locations. The courses might be conducted similar to Professional Military Education seminars, where acquisition professionals lead bi-weekly discussions regarding risk and innovation in their particular programs. Again supporting an environment where success and failures are openly discussed and participated in by acquisition members, including possible involvement by operators and user community. The CGO, FGO and civil service members could form the basis of this training by searching and conducting a continuing panel of discussion from the innovation professionals in their in their acquisition programs, local business and educational

14

institutions. Additionally, there are a number of creative learning centers and change consultants in the cities that host our acquisition centers. Their expertise and exposure to tools used in corporate businesses throughout the country could provide valuable instruction to the base level innovation roundtables. The training might be conducted out of the local Acquisition Center for Excellence (ACE) offices that are quickly being established at each acquisition center. The individual ACE training centers would support the SAF/AQ ACE office and provide cross-talk opportunities among the different bases. The key, according to the acquisition professionals contacted in this research, is to make the training a "grass roots" effort that lays a foundation to providing innovation ideas that are applicable to the current job.

"The best training is OJT, you can learn some basics in the courses, but you have to be able to put those basics to use or they're useless."
        CGO survey respondent

S - <u>The Right Support</u>

   The final piece of the JETS proposal is support or rewards. It goes back to an earlier assumption that individuals, especially high performing innovators, expect to be rewarded for stepping out and taking risks. Analysis of the interviews and survey write-in remarks identified a reoccurring theme--a lack of recognition or reward for taking risk. As one former CGO, who separated and started his own million dollar software company states, *the thing that was missing for me was the lack of control of my own destiny and feeling that I can reap the rewards of my efforts."* One long term proposal for recognizing and managing the careers of those innovators who make a difference has its origin in the operational community where a special designator is used to identify their experts. They are the "W" or Whiskey individuals and have been selected and trained to be the weapons and tactics experts in their profession. These officers, who have attended the Air Force Weapons School, carry a specialty designator on their active duty specialty codes. They represent some of the best in their field and are recognized, trained, tracked and rewarded for their accomplishments. Perhaps it doesn't make sense to make acquisition professionals whiskeys, but a representative level of achievement and career management development for innovators could be made available. Call them acquisition aces or acquisition intrapreneurs, but challenge and reward (job autonomy, funding leads, breadth of jobs and promotions) those who make agile acquisition happen. They may be civilians, which could be recognized in their annual appraisals, or military members in the acquisition field that

"we continue to use innovative thinking to get systems to the warfighter… we take the risks, but do not share in the rewards."
        CGO survey respondent

15

have been nominated by their program manager director. These individuals might chair the local ACE training offices and work as leads in the experimentation activities within their program offices. Those nominated would meet an approval board, suggest at the SAF/AQX level, and be formally designated as acquisition intrapreneurs. Once designated, these individual would be coded and their assignments managed by the system program director and SAF/AQX career management staff. An acquisition intrapreneur would be afforded greater opportunities to move between program offices, laboratories, operational tours and military and civilian education programs. As a recognized group of agile innovators they will be challenged, rewarded and carry the torch for a new breed of acquisition professionals.

Final Thoughts

The research indicated a number of areas where innovation in the short and long term can be realized from a system and individual perspective. The execution of acquisition career management proposals is difficult because they cut into many established processes and organizations, but the spirit and intent of agile acquisition provides the opportunity for organizational learning and real change. The simple fact is Air Force acquisitions today provide some of the most capable and amazing warfighting systems in the world. They can be faster in getting to field, but the successes realized in Afghanistan and around the world is an affirmation of the tremendous effort of many acquisition members. The JETS proposal and short term focus on funding to PCOs and engineers may provide career management options for getting quicker fielding results, but the innovative vision is more a journey than an end state.

End notes:
(1) Diane L. Coute, HBR, *The Anxiety of Learning*, March 2002, pp 100-106.
(2) R. Farson and R. Keyes, HBR, *The Failure-Tolerant Leader*, August 2002, pp. 64-71.

Attachment 1

MAJCOM and 2-letter organization name: _____

*Indicate the extent to which each statement accurately describes your **current job**.*

	Strongly Disagree				Strongly Agree

1. This job provides me with the opportunity to do a variety of challenging tasks. 1 2 3 4 5 6

2. Solving the technical problems of this job requires me to stretch my ability to devise creative or innovative solutions. 1 2 3 4 5 6

3. My unit challenges old ways of doing business. 1 2 3 4 5 6

4. My acquisition training has exposed me to a wide range of different approaches to address the challenges I face in my job. 1 2 3 4 5 6

5. I rely on contractors to accomplish many of the technical aspects of my work. 1 2 3 4 5 6

6. It's more important in my organization to use time-proven methods than to experiment with new approaches. 1 2 3 4 5 6

7. If funds were set aside to experiment and find alternative solutions, our organization would effectively use those funds. 1 2 3 4 5 6

8. I have enough risk management training that I feel comfortable with making decisions that might increase my project's risk exposure. 1 2 3 4 5 6

9. I will be reassigned before I can make a significant difference in this job. 1 2 3 4 5 6

10. My unit encourages appropriate risk taking. 1 2 3 4 5 6

11. Administrative or bureaucratic aspects of my work often prevent me from understanding the overall objectives of my job. 1 2 3 4 5 6

12. I communicate directly with my end users or customers concerning the various aspects of my project. 1 2 3 4 5 6

13. I spend part of my time trying new approaches so that my project can reduce cost and/or schedule impacts. 1 2 3 4 5 6

14. I can make specific changes to my project with respect to:

    a) funding 1 2 3 4 5 6
    b) schedules 1 2 3 4 5 6
    c) technical specifications 1 2 3 4 5 6
    d) overall system approach 1 2 3 4 5 6
    e) contracting terms 1 2 3 4 5 6
    f) application of policies, regs, FARs, and instructions 1 2 3 4 5 6

These questions address **career and advancement opportunities** based upon your view of the following.

	Strongly Disagree					Strongly Agree
15. My opportunity for promotion is directly tied to my current job performance.	1	2	3	4	5	6
16. My promotion is based upon on my organization meeting its performance objectives.	1	2	3	4	5	6
17. Achieving a certain rank will define the success I've had in my career.	1	2	3	4	5	6
18. I would prefer to move less often, but feel continued reassignments helps me stay competitive for promotion.	1	2	3	4	5	6
19. The advancement of my AF career frequently conflicts with the interests of my family.	1	2	3	4	5	6
20. If I could stay in a technical career track and advance in the AF, I would elect to do so.	1	2	3	4	5	6
21. The skills and lessons I've learned during Professional Military Education (PME) have made a difference in my current job.	1	2	3	4	5	6
22. A special bonus, such as the pilot bonus, would be an incentive to stay in the AF for 20 or more years.	1	2	3	4	5	6
23. Having the "right squares filled" is more important than job performance for promotion .	1	2	3	4	5	6
24. Under the current AF promotion system, advancement opportunities for non-operators are unlimited.	1	2	3	4	5	6
25. Ultimately, the AF promotion system rewards innovation and risk taking.	1	2	3	4	5	6
26. A special bonus would be an incentive for greater performance in my job.	1	2	3	4	5	6
27. I would chose in-residence PME even if better promotion opportunities were not a factor in the decision.	1	2	3	4	5	6
28. My spouses' career objectives play a significant role in my career choices.	1	2	3	4	5	6
29. Pursuing challenging projects is more important to me than receiving recognition.	1	2	3	4	5	6

Listed below are different opportunities which a job might afford. **Irrespective of your current job**, how much importance do you personally attach to each of the following items?

	Not Important					Extremely Important
30. To build and establish my own professional reputation.	1	2	3	4	5	6
31. To work on technically challenging tasks or projects.	1	2	3	4	5	6
32. To work on projects that have high visibility.	1	2	3	4	5	6
33. To work on those projects whose technical challenges and issues will help in my overall professional development.	1	2	3	4	5	6
34. To work on projects that will lead to my AF advancement.	1	2	3	4	5	6
35. To work on classified or reduced oversight programs.	1	2	3	4	5	6
36. To advance in the AF doing primarily technical research and engineering.	1	2	3	4	5	6
37. To advance in the AF towards a program manager position.	1	2	3	4	5	6
38. To gain breadth by experiencing a variety of jobs including operations, engineering, staff functions, and logistics.	1	2	3	4	5	6

*Listed below are a number of statements which might describe your **current Supervisor** or Rater.*

	Strongly Disagree					Strongly Agree
39. Is an excellent sounding board for new ideas.	1	2	3	4	5	6
40. Has been very instrumental in my professional development.	1	2	3	4	5	6
41. I have learned a great deal from him/her.	1	2	3	4	5	6
42. Encourages us to find new ways of doing business.	1	2	3	4	5	6
43. Keeps current and is well informed about the latest technical advances in program-relevant disciplines.	1	2	3	4	5	6
44. Believes strongly in making all decisions regarding my program through the existing chain of command.	1	2	3	4	5	6
45. Encourages me to participate in important decisions.	1	2	3	4	5	6
46. Has a good understanding of the techniques and methods I use in my work.	1	2	3	4	5	6
47. Is willing to accept my suggestions for changes to my project that I feel represent acceptable levels of increased risk.	1	2	3	4	5	6
48. Challenges us to find innovative approaches to problems.	1	2	3	4	5	6
49. Assigns me to jobs on which I am challenged professionally to perform well.	1	2	3	4	5	6
50. Is more focused on short-term goals than long-term implications of decisions.	1	2	3	4	5	6

Please include the following information to complete the survey.

Rank (circle one):　　　　01-03　　04-06　　Enl　　Civ　　Other:_____

　Number of programs worked during career:　　　　　　　　　_____

Percentage of those program which were waived, classified and/or pilot efforts:　　_____

Current job (circle one):　　　Eng　　PM　　PCO　　Log　　Ops　　Other:_____