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DEPARTMENT OF THE AIR FORCE
Thomas N. Barnes Center for Enlisted Education (AETC) **1 Oct 12**
Maxwell AFB, AL 36118

AIRMAN LEADERSHIP SCHOOL
STUDENT GUIDE

PART I
COVER SHEET

LESSON TITLE: SA08, CONTINUOUS IMPROVEMENT

TIME: 3 Hours

METHOD: Guided Discussion/Experiential

REFERENCES:

Air Force Instruction (AFI) 36-2618. *The Enlisted Force Structure*, 27 February 2009.

Calarco, A., Gurvis, J., *Adaptability: Responding Effectively to Change*. Center for Creative Leadership, Greensboro, N.C., 2006

Chang, Richard Y. *Step-By-Step Problem Solving*, Irvine, CA: Richard Chang Associates Inc., publications Division, 1993.

Department of the Air Force. *United States Air Force Core* Values, 1 January 1997. Department of the Air Force. *Air Force Smart Operations for the 21st (AFSO21) Century Playbook*, 27 May 2008.

Evenson, Karen. *Redefining F.E.A.R.: Maximizing Limited Resources with Unlimited Ideas*, Hilton Head Island, SC: Cameo Publications, 2004

Fossum, Lynn. *Understanding Organizational Change: Converting Theory to Practice*. Menlo Park, CA: Crisp Publications, 1989.

George, Michael. *Lean Six Sigma for Service*. New York, NY: McGraw-Hill, 2003.

Jones, Morgan D., *The Thinker's Toolkit: 14 Powerful Techniques for Problem Solving.* New York: Times Books, 1995

Kepner, C., Tregoe, B., *The New Rational Manager*, Princeton, NJ, Kepner-Tregoe Inc., 1997Mayo, Elton, *The Social Problems of an Industrial Civilization* (Routledge & Kegan Paul LTD),

Scott, Cynthia, D., and Dennis T. Jaffe. *Managing Change at Work, revised ed.* Menlo Park, CA: Crisp Publications, 1995.

STUDENT PREPARATION: Read this entire student guide prior to class and be prepared to discuss lesson concepts in class. Take time to read attachment 1 before class and write down lesson principles that you identify. Reading assignment is (7,525 words, total reading time is 63 minutes).

PART IB

GENERAL LEARNING OUTCOME: Students who graduate from Airman Leadership

School will possess an improved knowledge and understanding of the continuous improvement and change management processes.

SUPPORTED COMPETENCIES/DIRECTIVES:

The *Continuous Improvement* lesson supports the following AF Institutional Competencies:

- Managing Organizations and Resources – Change Management and Continuous Improvement

The *Continuous Improvement* lesson supports the following Air Force Learning Council competency

- Nuclear 2010, item 8

The *Continuous Improvement* lesson also supports AFDD 1-1

TERMINAL COGNITIVE OBJECTIVE: Comprehend Continuous Improvement concepts and their impact on NCO, unit, and mission effectiveness.

TERMINAL COGNITIVE SAMPLES OF BEHAVIOR:

1. Explain Continuous Improvement concepts and their impact on NCO, unit, and mission effectiveness.
2. Give examples of Continuous Improvement concepts and their impact on NCO, unit, and mission effectiveness.
3. Predict the impact of Continuous Improvement concepts and their impact on NCO, unit, and mission effectiveness

AFFECTIVE OBJECTIVE: Value Continuous Improvement concepts and their impact on NCO, unit and mission effectiveness

PART IC

ORGANIZATIONAL PATTERN: Topical

ASSOCIATED LESSONS: CF04, *Full Range Leadership Development*, CF03, *Critical Thinking*, and SA06, *Introduction to Negotiating*

LESSON OUTLINE:

CONTENT
INTRODUCTION: Attention, Motivation, and Overview
MP 1. Continuous Improvement A. AFSO21 B. Problem Solving
MP 2. Change Management A. Introduction to Change Management B. Change Management Activity
MP 3. Continuous Improvement Activity
CONCLUSION: Summary, Re-motivation, and Closure

PART II
STUDENT READING

"We can't solve problems by using the same kind of thinking we used when we created them."
~Einstein

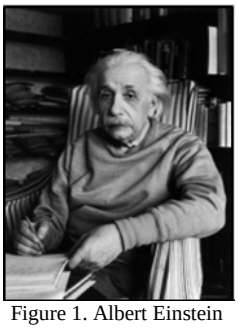

Figure 1. Albert Einstein

MP 1. CONTINUOUS IMPROVEMENT

According to our core values, we must pursue excellence in all we do. More importantly, as NCOs, we must think about innovative ways to use our resources more efficiently. In short, we must support the Air Force's culture of Continuous Improvement (CI) by employing a collection of methodologies including Lean, Six Sigma, Theory of Constraints, and Business Process.

> **Continuous Improvement (CI)** is the strategic, never-ending, incremental refinement of the way we perform our duties and responsibilities.

In 2014 The Air Force suspended the guidance for the IDEA program and provided implementation guidance and procedures for the new idea/suggestion program, renamed ***Airman Powered by Innovation Program.*** The Airman Powered by Innovation Program consolidated four Air Force wide programs (Innovative Development Through Employee Awareness (IDEA), Best Practices (BP), Productivity Enhancing Capital Investment (PECI) and Air Force Smart Operations for the 21st Century. Airmen who have ideas for the Airman Powered by Innovation Program (API) should work with their leadership and local AFSO21 experts to submit their ideas. AFSO21 experts at your base will work with you to make sure your ideas are properly reviewed, analyzed and submitted properly to the API idea cell. Let's take a look at some of the key concepts that AFSO21 experts rely on. Every NCO can use these same tools to identify areas for improvement, efficiency and innovation in their units.

AFSO21

AFSO21 principles and tools enable Airmen to integrate continuous improvement into their daily operations. The key to success is a culture where all AF employees think about process improvements and feel empowered to communicate with their chain of command or change agent. Think of how often you see inefficiencies and wasteful practices around you at home, work, and in society. **LEAN** targets the eight types of waste defined below. You can easily remember the eight types of waste by using the acronym **DOWNTIME.** If you can identify waste then it will be easier for you to see when larger problems exist in your organization.

Types of Waste

DEFECTS – Defects that cause rework or scrap are a tremendous cost to organizations and have a direct impact on the bottom line.

OVERPRODUCTION – Producing an item before it is actually required

WAITING – Whenever goods are not moving or being processed, the waste of waiting occurs.

NON-STANDARD OVER PROCESSING – Often termed as "using a bazooka to swat flies," many organizations use expensive high precision equipment where simpler tools would be sufficient.

TRANSPORTATION – Moving product(s) between processes is a cost that adds no value to the product.

INTELLECT – Not recognizing skill sets people bring to the job. Any failure to fully utilize the time and talents of people.

MOTION –unnecessary movement of data, files, tools, or equipment. Excessive motion to get the job done i.e. (bending, walking, lifting, reaching, etc.)

EXCESS INVENTORY – Having more files than can be processed during a specified period of time

Reducing or eliminating waste in the day-to-day work of Airmen is the core of continuous process improvement.

AFSO21's Five Desired Effects

Improvements center on core missions that Airmen handle daily and should encompass AFSO21's *Five Desired Effects*. These five effects guide improvement initiatives at every level and contribute to the demands of the Warfighter. Every Airman should know and understand these five desired effects and understand how they contribute to Air Force priorities while also generating efficiencies and savings.

The AFSO21 *Five Desired Effects* are:

1. Increase productivity of our people: Doing more of the right things with the same or less effort.
2. Increase critical equipment availability rates: All assets available at a greater

rate from aircraft, to information technology, to range, space, etc.

3. Improve response time and agility: Quicker response time to the Warfighter

4. Sustain safe and reliable operations: Reduce injury rates, increase people safety and safe use of materiel assets

5. Improve energy efficiency: Make energy conservation a consideration in everything we do[2]

AFSO21's Three Levels of Priorities

Some Continuous process improvements are quick and simple fixes; while others are complex and may involve several organizations working an improvement plan over a lengthy period. The three levels are *Just Do It*, *Rapid Improvement Events* (RIE), and *High Value Initiatives* (HVI).

Just Do It

This is a quick fix to a process irritant; a simple answer to an obstacle in an individual process. A "Just Do It" typically does not involve formal process reviews, teams, or an improvement event. ***It is an improvement that, when implemented, yields immediate results.*** For example, turning off a light in an empty room would be something that you would "just do." You do not need a lengthy process to determine that turning off lights conserves energy and saves money.

Figure 3. Components of RIE

Rapid Improvement Events (RIE)

These events usually last a week or more and apply a series of problem solving steps to determine root causes of problems and to eliminate waste, set improvement targets and establish clear performance measures to reach desired effects.

The four components of a successful RIE are:

1. Strong Leadership
2. Knowledgeable participants
3. Focused Event Scope
4. Implementation Plan and Result Metrics

Figure 4. A team looks at waste in their process during a rapid improvement event.

High Value Initiative (HVI)

These initiatives produce significant returns against key Air Force challenges. These processes are more complex and involve a cross functional team to ensure that identified improvements are incorporated into the day-to-day operations of an organization.

HVIs ***typically require four to six months*** in order to successfully define and implement the required process changes.

Understanding AFSO21's *Five Desired Effects* and its *Three Levels of Priorities* are important, but they aren't very useful without a problem solving approach.

Problem Solving

AFSO21 problem solving incorporates the approaches listed below.

- *Lean:* A systematic approach to identify waste, focus activities on eliminating it, and maximize (or make available) resources to satisfy other requirements. Lean is a journey of continuous improvement rather than a destination. There is no ―end point…only a never-ending journey of relentlessly eliminating waste.

- *Six Sigma:* A strategy that increases efficiency by statistical process control. A Six Sigma organization can be understood as having only 3.4 defects per million opportunities. Six Sigma relies on a repeatable 5-step problem solving method to project management and problem solving.

- *Theory of Constraints:* A philosophy and methodology for addressing logical thinking, scheduling and controlling resources and measuring performance. The philosophy emphasizes that a single constraint or bottleneck exists in any process and controls the output of the entire process.

- *Business Process Reengineering:* A management approach that examines aspects of a business and its interactions and attempts to improve the efficiency of underlying processes. Major and sometimes radical changes are sometimes associated with business process reengineering.[3]

Tips for Solving Problems

When facing a problem, it's a natural reaction to think about all the policies, procedures, and even Air Force Instructions that might narrow down the possible solutions. You must also remember to use your ability to think creatively. Most people like to solve problems and the Air Force of today needs NCOs who can think creatively to solve problems that affect the unit, mission and personnel. If the Airmen you supervise see you using a problem solving process to solve problems, then they will be more likely to follow your example. Your Airmen will not only accept problem solving, they will also seek problem solving opportunities if these four conditions exist:

1. They possess the skills needed to solve the problems that arise in their jobs.
2. They experience success in using those skills.
3. They are rewarded for successfully solving their problems.
4. They do not fear failure.[4]

You have read that people are problem solvers by nature. Unfortunately, we have some natural tendencies that have an adverse effect on our ability to analyze and solve problems:

- The emotional dimensions that influence our decisions
- The mental shortcuts our unconscious minds continuously take
- The way we view the world in patterns
- Our biases and assumptions
- The need to find an explanation for everything (even if it is not an accurate explanation)
- Our penchant to seek out and put stock into evidence that supports our mindsets and dismiss evidence that does not
- Our tendency to cling to untrue beliefs in the face of contradictory evidence [5]

The next time you prepare to solve a problem, take a step back and analyze the situation to see if you and your people are revealing these tendencies.

People will avoid problem-solving situations when they are unsure of how to solve their problems, when they do not experience success after trying to solve a problem, when they feel their efforts are not appreciated, and when they sense that they have less to lose either by doing nothing or by shifting responsibility.[6] Keep these things in mind when you or your Airmen are trying to solve problems.

Another important part of your journey as an NCO is to develop skills that make problem-solving behavior possible in both yourself and your subordinates. Oftentimes, you are told that you must "think outside the box" to solve a problem that exists. Well, how do you do this? One way is to teach yourself and your people how to use the four basic patterns of thinking. These four basic patterns of thinking are reflected in the below four questions from Kepner and Tregoe:

What's going on? This question begs for *clarification* and enables you to establish priorities and to decide when and how to take action to produce positive results.

Why did this happen? This question indicates the need for *cause-and-effect* thinking and enables you to move from observing the effect of a problem to understanding its cause; therefore, taking appropriate action(s) to correct the problem

Which course of action should we take? This question implies that some *choice* must be made. This pattern enables us to decide on the course of action most likely to accomplish a particular goal.

What lies ahead? This question looks into the future. This pattern enables us to assess the problem that *might* happen, the decision that *might* be necessary next month, year, or in five years. [7]

You are already aware of how AFSO21 incorporates problem solving into continuous improvement projects; now let's take a look at the different problem solving methods that you (NCOs) could use to solve problems.

Problem Solving Methods

Eight-Step Problem Solving. The Air Force has adopted a standard Eight-Step Problem Solving model to progress from assessment of current operations to measuring results after improvements are made. It is used in everything from rapid improvement events to larger reengineering efforts or complex problems. Examples include but aren't limited to: reducing TDY travel costs to formal training courses and PME, saving money/resources during fiscal budget constraints, etc.

While the Air Force presently follows this eight-step problem solving model as shown in Figure 5, it is important to know that there are many additional methods for solving problems and as an NCO you must understand that these tools are here to assist you with problem solving at your level. When you face a problem in your unit or with your subordinates, select the problem solving method that you think will help you to achieve a solution or

Figure 5. 8-step problem solving model

series of solutions. You can use many of these tools in your personal life as well. Let's explore some additional methods available to you for solving problems.

The **Plan-Do-Check-Act (PDCA) Cycle** is also referred to as the Deming cycle. It is a four-step model for solving problems and carrying out change. You've probably already used this model in your day-to-day problem solving efforts without even knowing. Every time we face a problem we enact some sort of plan. This method is easy to remember and easy to use. Just as a circle has no end, the PDCA cycle should be repeated again and again for continuous improvement. The PDCA cycle can be used when starting a new improvement project, when developing a new or improved design of a process, product, or service. It can also be used when defining a repetitive work process, when implementing change and finally when planning data collection and analysis in order to verify and prioritize problems or root causes.

Plan – Recognize an opportunity and plan a change

Do – Test the change by carrying out a small-scale study

Check – Review the test, analyze the results and identify what you've learned

Act – Take action based on what you learned in the check step. If the change did not work, go through the cycle again with a different plan. If you were successful, incorporate what you learned from the test into wider changes.

The **Define, Measure, Analyze, Improve, Control (DMAIC) methodology,** is a disciplined 5-step problem solving approach used in the Six Sigma strategy to deliver high performance, reliability, and value to the end customer. The DMAIC methodology should be used when a product or process is in existence that is not meeting customer specification or is not performing adequately. Manufacturing companies such as Lockheed Martin, Boeing, etc. have used this model for their process improvements.

Figure 6. DMAIC problem solving method

- **Define:** First define the improvement opportunity, develop an improvement project plan, define the process and evaluate the process. This can include conducting a Failure Modes and Effects Analysis (FMEA), and identifying critical parameters.
- **Measure**: Measure the existing process and identify the process capability requirement.
- **Analyze:** Process is analyzed to determine its capability. Data is analyzed to identify opportunities for improvement and to develop plans for improving the process. The steps in this phase include root cause analysis, updating the FMEA, developing an improvement plan, and determining the path forward.
- **Improve:** The plan that was developed in the analyze phase is implemented. The results of the change are evaluated and conclusions are drawn as to its effectiveness. This can lead to documenting changes and updating new instructions and procedures.

- **Control:** Control plans are developed to ensure the process is institutionalized and are developed to ensure the new process continues to be measured and evaluated. This can include implementing process audit plans, data collection plans and plans of action for out of control conditions, if they occur**.**

Think about a recent problem or wasteful process that your unit faced. How did the unit implement the solution to this problem? When implementing a solution to a wasteful process in your organization you will need a stable foundation. Six "S" will help you to establish discipline when you implement a solution. An example would be establishing a foam cut-out tool board to provide a visual management for tools. A worker would be able to quickly see if a tool was missing from its proper location on the tool board. In a unit where Six "S" is applied on a regular basis, there is a place for everything, everything is in its place, and the established standard is sustained. The need for Six "S" is visually determined by asking the most basic questions. [8]

Six "S"

Six "S" is often used during step 6, *See countermeasures through* of the 8-step problem-solving model. Six "S" is also a systematic approach to productivity, quality, and safety improvement that you can use in your immediate work center. It focuses on achieving visual order, organization, cleanliness, and standardization. The following Six "S" areas can help improve profitability, efficiency and service:

1. **Sort** – clean, organize and keep only what is necessary
2. **Straighten** – identify, organize, and arrange a place for everything
3. **Shine** – regular (usually daily) cleaning and maintenance
4. **Standardize** – simplify and standardize; make it easy to maintain
5. **Sustain** – continue to train and maintain the standards
6. **Safety** – make safety a priority in all improvement areas

Several expected outcomes occur when Six "S" is followed:

1. Discipline in how the workplace is ordered
2. Less waste in movement, waiting and excess inventory
3. A self-maintaining workplace

Regardless of which method you or your team use from the continuous improvement process to solve a problem or eliminate a wasteful practice…remember you will have to standardize the new way of doing business. This is where the practice of standard work becomes very important.

Standard Work is an agreed upon set of work procedures that: effectively combine people, materiel, and machines to maintain quality, efficiency, safety, and predictability. Work is described precisely in terms of cycle time; work in process, sequence, takt time, layout, and the inventory needed to conduct the activity. Takt time sets the pace of production to match the rate of customer demand and becomes the heartbeat of the system.

Standard Work is the foundation of continuous improvement. If work processes are not standardized, it is impossible to effectively experiment and test new ideas for improvement. If the current process is not standard, then it will be impossible to assess the impact of improvements upon process outputs. To ensure consistency and standardization in work processes: involve Airmen from all shifts; let the process workers define the work and gain consensus; keep it simple; and document the standard work and train from the documentation.[9]

Actions

The standard work of every process step will be unique. Although each standard work event is a custom process, there are a few things that you should keep in mind across all such efforts.

1. Involve personnel from all shifts: In many 24/7 operations there will be at least three methods of working the process: First shift's method, second shift's method, and the third shift's method. Members from all shifts working the same tasks together in the same place and at the same time will help establish best practices for standard work.

2. Let the process workers define the work and gain consensus: They know the work better than anyone else so telling them how to do it is a recipe for disaster. They also need to understand the benefits and develop ownership of standard work. One of the best ways to develop ownership and buy-in is to involve them in the change process.

3. Keep it simple: Unnecessary complexity adds unnecessary opportunities for failure.

4. Document the standard work and train from the documentation. Once the ―best possible method is agreed on it must be documented so that everyone can learn about the new standard and everyone can now measure themselves against the standard.

Continuous improvement breeds changes and you must be ready and willing to adapt to changes. The Air Force is in a constant state of change and moving forward to face future challenges and missions. NCOs have the important responsibility to anticipate change, react to it and assist subordinates in doing the same. Let's take a look at the principles of Change Management which include how people deal with change in the workplace.

MP 2. CHANGE MANAGEMENT

Introduction to Change Management

Change management is a structured approach to change in individuals, teams, organizations and societies that enables the transition from a current state to a desired future state. Organizational change management includes processes and tools for managing the people side of change. Change management involves aligning an agency's organizational culture with new ways of doing business. An organization's culture can be a difficult thing to get a handle on. Defined as "the underlying assumptions, beliefs, values, attitudes and expectations shared by the members of an organization," organizational culture is comprised of the current human and political dynamics, as well as the organization's history.

Responsibilities

More often than not, the task of implementing change falls to our first-line supervisors. In fact, AFDD 1-1, *Leadership and Force Development* and AFI 36-2618, *The Enlisted Force Structure*, charge all NCOs to support and explain leaders 'decisions, while at the same time, embracing the change and transformation that results from those decisions.

Whether initiating the change or implementing it, NCOs must be prepared to deal with change effectively. Before you can explore strategies to help you deal with change, you must first understand the various roles of individuals during the change process.

Individual Roles

Every change process includes the roles of *Change Sponsor*, *Change Agent*, or *Change Target* and NCOs may fill one, two, or all three of roles during any given change. Getting people to see past their own fears—real or perceived—is a challenge of particular relevance to managers and requires a unique kind of leader—sometimes called a change manager or change "agent."

Change Sponsors: They initiate change because they have the power and authority to determine why, when, and how changes will occur. Although most change sponsors come from senior leadership, any NCO can act as a change sponsor within his or her area of responsibly. NCOICs implement a myriad of changes to policies, procedures, and processes (e.g. new training plans, new work schedules, reassign additional duty assignments).

Change Agents: NCOs in this role are responsible for determining the best way to implement a change and then actually implementing it. For example, your flight chief may want a new training plan implemented, but she not only expects you to figure it out, she expects you to ensure everyone affected by the change understands and supports the new requirement.

Change Targets: This refers to all individuals or groups affected by the change. Because change targets often help implement the change itself, they usually include the Change Sponsor and Change Agent as well. The majority of the time you will be a change target right alongside your Airmen. Remember this when dealing with changes that occur.

Stages of Change (Janssen's Model of Change)

Now that you have an understanding of the roles people fulfill in the change process, let's take a look at Janssen's Model of Change.

Marvin R. Weisbord discussed some of the ways people deal with change in *Toward Third Wave Managing and Consulting: Productive Communities Managing and Consulting for Dignity and Meaning within the Workplace*. In that book, he relayed Janssen's model of change, (see Fig 9). According to this model, we go through four stages of change: **Comfort, Denial, Confusion,** and **Renewal**. Although these stages represent the sequence of feelings we experience, we don't spend the same amount of time in each stage.

We begin in the ***Comfort*** stage where things are routine and we are comfortable, satisfied, and calm. We move from Comfort to a state of ***Denial*** when we are forced to confront external change. We believe if we deny change, we will have less stress…yet the opposite is actually true. The more we resist change or procrastinate, the more stress we inevitably experience. We stay in the Denial stage until we own up to our fear or anxiety about the change.

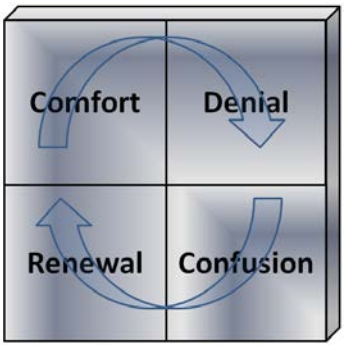

Figure 7. Janssen's Model of Change

After the Denial stage we enter the stage of ***Confusion.*** This is where we accept the change and begin to grapple for ways to proceed from the known to the unknown. When you enter the confusion stage, anxiety builds and we store this energy while we are deciding whether to invest in the change. Every new change requires optimal anxiety. If there is too much that the change is paralyzed…too little and we become unmotivated to push the change forward. If you or your Airmen are in the Confusion stage and using the energy from this stage to take action…then you will be the ones to carry the change forward.

Finally, we enter the stage of ***Renewal*** where we accept the change. We may not *like* the change but we've accepted it. People in the Renewal stage are looking for answers and new ideas. They are open to site visits to see what others have done and to implementing PDCA cycles (the Deming Cycle: Plan, Do, Check, and Act). From Renewal, we then cycle right back to the first stage, which is Comfort.

This is a very general overview of how people respond when they're faced with change. Understanding our individual reactions to change will help us manage change more efficiently. First, recognize how you feel about the change(s)…then observe your Airmen to see how they feel about the change(s). This will allow you to focus the bulk of your energies on positively managing and leading rather than negatively "dealing with personalities."

It is also helpful to understand the levels of change people go through as you attempt to move them through the four stages of change. How did you feel when you first arrived at Airman Leadership School? Keep all these concepts in mind when you are going through new experiences in the coming days. Let's take some time to explore how people react to change.

Reactions to Change

As you have already read, getting people to change is difficult, and getting an entire organization to change can seem impossible. If we are to succeed in moving our organizations forward, we must obtain buy-in from those affected by the change. According to Cynthia Scott, author of *Managing Change at Work,* when 5% of the people in a group adopt a change, the change is imbedded within the organization. When 20% adopt it, the change is unstoppable.[11] To push change to an unstoppable level, we need to understand how people accept and adapt to change.

Do you ever notice how some people are always trying to shake things up, while others avoid change as if it were a disease? Guess what? Your ability and willingness to accept change is based entirely on your personality. Sound familiar? How have you reacted to changes?

Individual Reactions to Change

Figure 8. below displays the five levels or reactions to change otherwise known as *diffusion of innovation*.

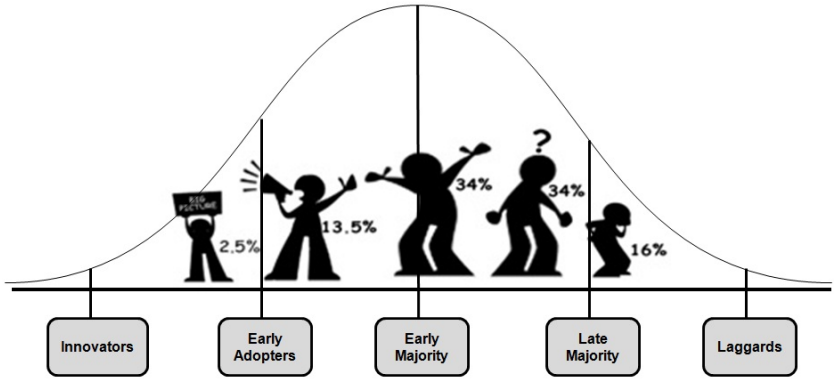

Figure 8. Reactions to Change

Innovators are a small percentage of the population—those who immediately embrace new ideas. They are usually venturesome, educated, and more willing to take risks than the rest of the population. Innovators are "big picture" thinkers who see potential and imagine possibility in almost anything, and are able to put both into action.

Early adopters are usually social and opinion leaders who are often popular, educated, and able to see a competitive advantage in adopting new ideas early. They are very effective in spreading acceptance of new ideas because they garner the respect of their peers who look to them for guidance.

The ***early majority*** makes up one of the largest groups of people, providing an important link in the change process because they tend to represent mainstream thinking. They slowly follow with calculated willingness to adopt innovations, and they tend to deliberate for some time before completely adopting new ideas. Unlike the early adopters, the early majority are seldom looked to as opinion leaders because they tend to get involved *only* after something has become big or successful.

The ***late majority*** is the other large group in the middle of the curve. Most people in this category are hampered by feelings of insecurity and skepticism, which prevent them from taking risks. As a result, members of the late majority usually wait too long to adopt change by looking for guarantees before getting involved.

Laggards are the last people to embrace new ideas, and they influence no one! They are usually less educated and uninformed, which tends to make them close-minded and afraid of change. They rely mainly on neighbors and friends as their main sources of information, and have no desire for new ideas or personal success.[12] So what does all this mean to you? Well, who would you want on your side if you were implementing change in your work center—the innovators and early adopters, or the laggards and late majority? Do you want people who embrace and even initiate change, or do you want people who

run and hide at the first sign that something is changing?

Levels of Change

According to Elton Mayo, noted for his work on the Hawthorne studies, there are four levels of change present in people. Understanding these levels of change is extremely important for unit managers working through the change process.[13]

> ***Knowledge*:** This is generally the easiest change to bring about. It can occur as a result of reading a book or article, or hearing something new from a person with information. For instance, reading the newest AFI on dress and appearance alerts Air Force members to the latest changes in uniform standards.
>
> ***Attitude*:** Attitudes are more difficult to change because they are emotionally charged (positive or negative). For example, reading and understanding the latest uniform changes does not necessarily mean we agree with the changes.
> ***Individual Behavior*:** Changes in individual behavior seem to be significantly more difficult and time-consuming than the previous levels. We can have the knowledge and the attitude, but now we have to put our knowledge and attitude into action through behavior. Often, habits stand in the way of achieving this level. Habits are often deeply rooted, thus changing them may be a lengthy and difficult
>
> ***Group Behavior***: Finally, changing individual behavior is not easy, but it's certainly easier than changing an entire group of people. You may be attempting to change many customs and traditions that have developed over many years. The old saying, "We've always done it this way!" may be deeply ingrained.

Change Cycles

1. *Directive Change Cycle*: Quite simply, this is change imposed by some external force, such as a commander, superintendent, or supervisor. It begins with change imposed upon the group or organization. As the group is forced to comply, individual behavior is affected through compliance within the group. The directive change cycle (Figure 9.) consists of position power used to change group behavior, then individual behavior, which causes an increase in knowledge, and ultimately a change in attitude.

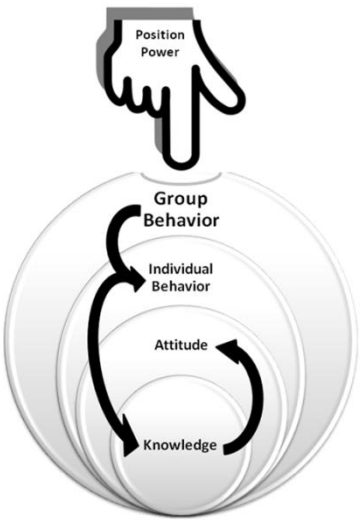

Figure 9. Directive Change Cycle

Notice how the cycle proceeds from individual behavior to knowledge, and then back to attitudes.

2. *Participative Change Cycle*: A participative change cycle (Figure 10.) is implemented when new knowledge is made available to the individual or group. The eventual success of the change is dependent upon the group's positive attitude and commitment in the direction of the desired change. While it is understood that this type of change is not frequently used in a military environment, it is widely held that acceptance of the change by the group is significantly increased if they are allowed to participate (when feasible) in the decision-making process.

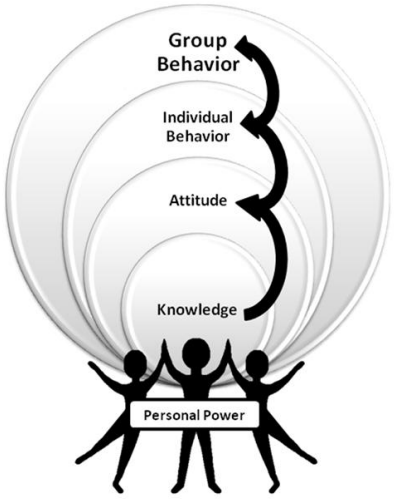

Figure 10. Participative Change Cycle

The effective use of personal power becomes the influential tool used to successfully complete the change cycle. At the knowledge level, the group accepts the data or information, develops a positive attitude about the change, and then translates the attitude into individual or group action.[14]

By now, you may be wondering, "Should I use directive change or participative change?" The simple answer is that it depends on the situation. As you've already read, directive change comes from position power and is usually effective when change must be implemented quickly and when leaders are not seeking subordinates' inputs. This is also usually a good approach to take if the decision is unpopular, but necessary. Participative change on the other hand, relies on personal power and takes longer to implement than directive change. By involving subordinates in the change process, participative changes tend to last longer than change brought about through the directive method.

As you supervise Airmen, you will initiate and/or implement change at some point. Understanding the change process and appropriately using your leadership skills will contribute to successful change implementation within your work center and organization. Following each phase of the change process will significantly increase your success at implementing change.[15]

Adaptability is another important factor to remember when you and your Airmen go through organizational changes. Let's take a look at the working definition of adaptability.

Adaptability is the ability to adjust to changed, unexpected or ambiguous situations by actively seeking information and by demonstrating openness and support of different and innovative change ideas.

Remember to adapt as you go through the phases of change the next time a change occurs in your organization and/or life.

The Phases of Change

Behavioral scientist Kurt Lewin is known for developing the force field analysis, a technique used for diagnosing and analyzing various change strategies in particular

situations. In examining change, he identified three phases: unfreezing, changing, and refreezing.

1. Unfreezing: The first step in deciding to create a change is to recognize the need for change. This is often the most neglected, yet essential, element of any organizational change. To perceive a need to change, you must first understand it. Become the expert on what you're changing, inform your people about the change, and tell them how it will improve or simplify their ability to accomplish their job.

- Create a felt need for the change: As a Change Agent, your mission is to sell the importance of the change and explain its effects on your people and their jobs. If you can get the majority of your Airmen to understand and accept *the need* for change, the process will work much smoother, with less pain and frustration.

- Deal with resistance to change: Many people fear the unknown. Developing a plan to calm those fears will increase the likelihood of a successful change; you must listen to them for constructive feedback. They may have legitimate concerns that you didn't think of that might help the process move smoother. Some individuals feel they could lose power due to a proposed change. Put them at ease by explaining how their new responsibilities will help them. Educate your Airmen about an upcoming change, and tell them the results you expect to see from the change. Use open and honest communication to reduce uncertainty in your work center. Make a real effort to talk with personnel directly affected by the changes. Where appropriate, allow those affected by the change to participate in decision-making and implementation. If possible, introduce change slowly. Provide training and reinforce desired behaviors. Use force only as a last resort since it can negatively affect long-term change.

Never forget that people are one of your greatest assets, and they will directly impact the outcome of any change. A solid plan will help you manage the resource distribution decisions, resistance to the change, and the overall impact of the change process. It will also help you develop standards for measuring effectiveness of the change once it is in effect. A good example of unfreezing was the introduction of the Virtual Military Personnel Flight (vMPF). Some individuals were probably content with waiting in line at their local MPF to have a personnelist update their personal info, but this was no longer an efficient way to do business with our smaller force. The Air Force created a way for individuals to access their pertinent data electronically from a personal computer to help keep their personnel records current. The vMPF allows people to make certain updates and changes, saving time for everyone. By educating users on the vMPF and highlighting the ease and benefits of using the vMPF, the Air Force created a felt need for change and reduced the number of people who would otherwise resist the change. After unfreezing, the next phase is the changing phase.

2. Changing: Changing involves actually modifying technology, tasks, structure, or people. It's the movement from the old way of doing things to the new way of doing business. New equipment is installed, training on the new equipment occurs, organizational restructuring happens, new performance appraisal systems are implemented, and so on. In some instances, there may be a need to go back to the unfreezing phase and re-educate/support those having trouble making the transition.

Your role in this phase is to monitor the change as it occurs, paying close attention to those most affected by it. Ensure your plan unfolds as intended, or adjust it as necessary. Remember even the best plans go wrong sometimes. Be there as the changes are implemented so you can deal with problems that may arise. In addition, if you're not around to witness the changes happening, they may not be carried out as they should. Humans are creatures of habit and don't always correctly interpret what is intended or communicated.

During the initial vMPF implementation, there were many problems. People got error messages, had password problems, experienced difficulty saving data, and so on. Adjustments were made along the way, and supervisors who stayed informed made the transition much easier for their people. Discovering the convenience of vMPF led to the final change process phase: refreezing. vMPF has changed again and again to offer Airmen a wide range of applications from retraining to retiring

3. Refreezing: Just because the change was implemented and appears to be going well, doesn't mean your job is complete. You must lock in (or refreeze) the new procedures to become a permanent part of daily operations. Without refreezing, your work center may revert to doing business the old way, then all the efforts up to this point would have been for nothing. Once the vMPF was up and operational, it was important for supervisors to stay up to date on the benefits of the vMPF. Individuals having problems with the new way of accessing their personnel records might have just given up if they didn't receive positive reinforcement from the system or their supervisors. You must encourage people to overcome the negatives of change and reaffirm the positive.

During refreezing, ensure you evaluate the results of the change. Did you obtain the desired results? Are people still supporting the change? Are they reverting to old ways of doing things? Have you documented the change for continuity purposes? Since old behaviors may resurface, it may be necessary to evaluate the results of your change periodically.

As you already know, people, as well as organizations, handle change differently. Some individuals and organizations readily accept change, while others seem to avoid accepting change. Whether change is imposed from senior leadership or by you, understanding your role in the change process is vital to ensuring successful change implementation within your work center.

CONCLUSION

The Air Force will continue to demand smarter, more efficient ways to do business from our force. The AFSO21 mindset will bring about changes well into the future and you must remember that individuals and organizations will handle change different. Some individuals and organizations readily accept change, while others are slow to change. It is up to you to implement these continuous improvement concepts in your organizations. The Air Force wants your ideas and solutions to our problems. Your leadership and dedication to the mission is vital to our future success.

Attachment 1

Continuous Improvement Scenario

1. The Security Forces Commander calls a meeting with his Training Section and says, "During the last two base exercises, only half of our augmentees were properly trained. Your process is inefficient and ineffective. We need to be able to deploy 120 Defenders in 60 days; therefore, I need you to figure out a better process so we have enough qualified augmentees to man the flights during our deployment." Turning to TSgt Bernard the NCOIC, the commander says, "Get it done!"

2. After the commander departs, TSgt Bernard thinks about how he's only been in the job 3 weeks, and even though he is anxious, he immediately starts examining the augmentee training program for inefficiencies. He realizes there are only 62 augmentees fully qualified out of the 112 required. On closer examination, he discovers the previous program manager did not standardize training for the program, there were no approved wing or squadron instructions, and the training cadre failed to follow the AFI requirement for training augmentees. Using his previous experience as an Augmentee Program Coordinator, he determines his team will need to train 112 augmentees, plus 22 additional qualified augmentees as back up. In order to achieve this, he needs to schedule several training classes over the next two months. TSgt Bernard spends some time reflecting on his decision and thinking about how his staff will react to the schedule change and concludes that his staff will be able to complete the commander's tasking before the deadline…his only concern is that SSgt Miller will have difficulty separating his feelings and biases about teaching augmentees.

3. TSgt Bernard calls together his trainers and says, "If we're going to meet the commander's deadline, then we have to increase our throughput. Therefore, for the next 2-months we will teach two augmentee-training classes per month instead of one. I recognize this doubles our workload, but I don't see any other way. SSgt Roderick shares his thoughts. "That may not be necessary. In my opinion, we spend too much time using expensive audio/visual equipment and videos to teach the augmentees. If we provided more hands-on training we could streamline our process and cut out the waste." SSgt Wright chimes in, "Our last NCOIC never allowed us to use the skills we learned in the Basic Instructor Course." TSgt Bernard responds, "I am interested in all ideas that will achieve our

objective." Getting excited, SSgt Roderick says, "I'll bet we could cut the class to 3 days if we cut out the unnecessary topics not required by the AFI and reduce the number of lectures." SSgt Miller jumps in with, "I like the lectures and the current training schedule!" SSgt Roderick cuts Miller off and says, "We wasted months lecturing augmentees…but we never had them fire weapons or work with the flights." SSgt Wright adds, "Many augmentees wait 6-8 months to pull Security Forces duties…I guarantee they forget everything."

4. The team draws the 5-day schedule on the board. SSgt Roderick immediately suggests, "Most augmentees have been on-station for over a year and received a base tour during their First Term Airman's Course; therefore, we could eliminate the 4-hour base tour we conduct." TSgt Bernard replies, "That is a great idea!" Turning to SSgt Miller, TSgt Bernard asks, "What do you think?" SSgt Miller responds, "I like giving the tour, why do we need to change that?" SSgt Wright says, "Miller, I understand your concern because I was anxious about changing our training methods too…but wouldn't you rather teach two 3-day classes instead of two 5-day classes?" SSgt Miller replies, "Hmm…I never thought of it like that…I just figured SSgt Roderick's suggestion of more hands-on training would be too challenging…but maybe it won't be so bad after all."

5. After a couple more hours of brainstorming, TSgt Bernard says, "It looks like a 3-day training class is possible…let's put together the schedule to see how it looks." TSgt Bernard draws out the schedule. Day 1 includes In-processing and mandatory briefings. Day 2 covers hands-on training such as (handcuffing, searching, security procedures, etc.) Day 3 allows the augmentees time to practice their new skills before the final evaluation.

6. TSgt Bernard observes the team conduct their first two training classes, and is pleased to see the new process working, and the team enjoying themselves. After the second class, SSgt Miller tells TSgt Bernard, "Sir, I was skeptical at first…but now that I've taught two classes…I realize the old way did not prepare the augmentees for duty. "I like our new process!" TSgt Bernard replies, "I'm glad you feel that way."

7. After returning from briefing the commander, TSgt Bernard tells his team, "The commander is thrilled with our hard work, and impressed with our ability to train the

augmentees needed in half the time allowed. In fact, he's so happy he's awarded us a day off. In addition, he plans to conduct a recall next month to test out our augmentees. I am confident our training methods will prove effective during the recall. We'll conduct the 3-day course we created for all future augmentee training classes and it will be standardized in the wing instruction. Now… let's talk about that day off!"

NOTES

[1] Department of the Air Force. *Air Force Smart Operations for the 21st Century (AFSO21) Playbook,* 27 May 2008
[1] Ibid.
[1] Ibid.
[1] Charles H. Kepner, and Benjamin B. Tregoe, *The New Rational Manager* (Princeton, NJ: Princeton Research Press, 1997, 21
[1] Jones, Morgan D. *The Thinker's Toolkit: 14 Powerful Techniques for Problem Solving.* New York: Times Books, 1995
[1] Charles H. Kepner, and Benjamin B. Tregoe, *The New Rational Manager* (Princeton, NJ: Princeton Research Press, 1997, 9-10
[1] Ibid.
[1] AFSO21, *Playbook*, J-44
[1] Ibid., J-67
[1] Cynthia D. Scott and Dennis T. Jaffe, *Managing Change at Work: Leading People Through Organizational Transitions* (Menlo Park, CA: Crisp Publications, 1995, 4.
[1] Ibid., 374-75
[1] Elton Mayo, *The Social Problems of an Industrial Civilization* (Routledge & Kegan Paul LTD), 369
[1] Ibid., 381
[1] Ibid.