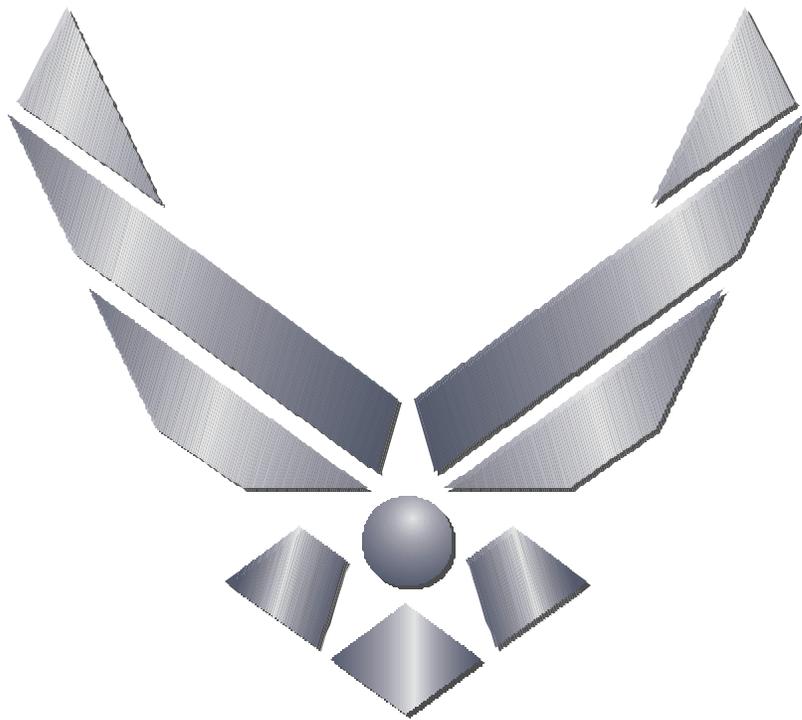


Building A Knowledge-Centric United States Air Force

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Introduction

Those who knew the Belgrade, Yugoslavia bombing target was the Chinese Embassy and not a weapons factory had no process in place for sharing that knowledge in a timely manner. Had there been a mechanism in place to facilitate this, the consequences of that mission would have in all likelihood been very different.

Imagine the accumulated wisdom of everyone in DoD being accessible to *you*, where *you* need it, when *you* need it, and in the form *you* require. In addition, imagine being able to quickly and precisely pinpoint and retrieve just the information *you* need from the entire knowledge repository.

The Air Force must ensure that its warfighters have access to the knowledge they need, when they need it, and in the required form, in order to achieve desired mission outcomes and information superiority. To that end, it faces the challenge of implementing Knowledge Management (KM) principles and standards across the Air Force in order to retain the knowledge that exists in the minds of those who are leaving, so that it can be transferred to its younger and less-experienced personnel.

Knowledge Management is not something that comes pre-packaged or that can be purchased as an “off-the-shelf” product. Successful institutionalization of the KM discipline within the Air Force will require cultural and behavioral changes in the way information is viewed and used across the Air Force.

Knowledge Management: Its Importance to the Air Force

The Air Force faces the challenge of looking beyond its physical organizational assets, recognizing the value of knowledge, and developing a framework and architecture for managing one of its essential assets, its intellectual capital. This challenge becomes even greater as the total force continues to shrink, knowledge-rich career personnel retire, and the need for accessible, accurate and timely knowledge becomes more critical for the warfighter.

For example, in the past 10 years the Air Force has seen a 62% drop in (civilian) employees with less than 8 years of service and an 11% increase in the number of employees who are eligible for optional retirement. In testimony before the House Armed Services Committee, the Deputy Assistant Secretary of the Air Force (Force Management and Personnel) speaking on civilian personnel readiness, stated that in five years over 45% of our civilian workforce will be eligible for optional or early retirement.

Assuming such projections hold true, this disturbing "brain drain" scenario only strengthens the need for institutionalizing Knowledge Management across the Air Force.

Compelling Reasons for Knowledge Management

The findings of a study presented at the World Economic Forum this Spring by the University of Southern California's Center for Effective Organizations and the executive research firm of Korn/Ferry International do an excellent job of defining the need for Knowledge Management.

Surveys of more than 4,500 scientists, managers, and engineers in 10 leading technology-intensive companies; interviews and focus groups with more than 500 business and technical leaders, revealed that employees generally believe they are vastly under-using organizational knowledge and the electronic tools available to help them share it. We think we can all relate to several of the study's findings:

- 68% of the study participants said their companies don't provide adequate access to corporate knowledge and know-how.
- 69% said reinvention of the wheel is common in their organizations.
- 72% reported that their companies fail to re-use and incorporate knowledge from other projects and other parts of the company.
- 79% didn't believe they had adequate knowledge about what their competitors are doing. (As applies to the Air Force, this might be interpreted as "adversaries.")
- And finally, 88% said they don't have access to lessons learned elsewhere in their organizations.

Organizations that are able to capture and share knowledge enhance their strategic capabilities, achieve higher levels of technical effectiveness and obtain superior business [or operational] performance.

The CKO Special Interest Group of the Federal CIO Council's Knowledge Management Working Group established several compelling reasons for establishing a strong KM program

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- ❑ Provide an IT-enabled information base that gives senior Air Force leaders and warfighters access to the information and services they need.
 - ❑ Establish a network of knowledgeable Air Force officer, enlisted and civilian personnel who can add value to warfighter information requests.
 - ❑ Provide the right information in a context that aids Air Force decision-making.
 - ❑ Use information and knowledge to align organizational actions with the Air Force vision and missions.
 - ❑ Achieve knowledge and information superiority over adversaries.
 - ❑ Change the value proposition from one of delivering goods and services to that of delivering knowledge and expertise about those goods and services.
 - ❑ Share lessons learned and “best” practices across the “corporate” Air Force.
 - ❑ Provide electronic access to information-rich pools of ideas, products and services so the warfighter can capitalize on them.
 - ❑ Provide an infrastructure for “social” and electronic networking to develop new products or services.
 - ❑ Focus on knowledge of warfighter needs to drive organizational efforts and improve “customer” outcomes and experiences with the services provided.
 - ❑ Facilitate and accelerate the learning process, create opportunities for individuals and groups to put new knowledge to use
 - ❑ Leverage organizational knowledge so that the right information is provided to the right people in an understandable context.

Knowledge Management will help facilitate the information superiority envisioned in Joint Vision 2010, the goals of the DoD Information Management Strategic Plan, the Air Force CIO Strategic Plan, and the Air Force Communication and Information Strategic Plan.

Accordingly, it is essential for the Air Force to capture, share, retain and manage the knowledge and experience that reside in the minds of its officer, enlisted and civilian workforce.

In order to assure information superiority in the new millenium, and to capitalize on the opportunities that the KM challenge presents, the author recommends the Air Force take several actions:

- ❑ Designate an Air Force “Chief Knowledge Officer” (CKO) and/or an appropriately funded executive-level KM advocacy office.
- ❑ Establish an Air Force KM team.
- ❑ Establish Air Force KM objectives, develop an Air Force-wide KM policy and strategy.
- ❑ Identify an appropriate Air Force KM information technology infrastructure; establish and promote a common KM technical solution or suite of tools, consistent with the Joint Technical Architecture – Air Force (JTA-AF).
- ❑ Revive Information Management as it is defined in DoDD 8000.1, Defense Information Management (IM) Program.
- ❑ Educate and train senior leadership and warfighters on KM, its importance to the Air Force mission, benefits, and use.
- ❑ Apply KM to ongoing initiatives such as GCCS-AF, GCSS-AF, HAF 2002, etc.

What Is Knowledge?

KM gurus Thomas Davenport and Laurence Prusak are the authors of “*Working Knowledge: How Organizations Manage What They Know*”. They have characterized knowledge as a framework for evaluating and incorporating new experiences and information built upon framed experience, values, contextual information, and expert insight.

Knowledge is information in context, enhanced with connectivity, judgement and intuition. In organizations, representations of knowledge are often embedded not only in documents or repositories but also in organizational routines, processes, and norms.

A Working Definition

For purposes of this paper, knowledge is defined as “*Understanding gained through experience, observation or study.*” (E-Gov Knowledge Management Conference, April 2000)

Explicit and Tacit Knowledge

There are two forms of knowledge that must be understood before implementing an enterprise Knowledge Management program.

Explicit Knowledge is knowledge that can be codified and stored physically or electronically. It does not require an individual to explain or interpret the information. It stands on its own and must be both actionable and learnable. Examples include lessons learned, analysis reports, summary documents, financial analyses, worksheets, etc.

Tacit Knowledge resides in the minds of people and is difficult, if not impossible, to capture and store externally. Tacit Knowledge is derived from a combination of experience, intellect, wisdom, business acumen and intuition. Examples include knowledge that is created in meetings, at the office, in the kitchen at home, in discussion groups, at social events, at workshops and conferences, etc.

What Is Knowledge Management?

The “business” problem that KM is designed to help solve is that knowledge acquired through experience is not reused because it is not shared in a formal way. Knowledge Management is more than just a “product,” it is a way of doing business.

A Working Definition

As used by the author in this paper, Knowledge Management is defined as “*The process through which an enterprise uses its collective intelligence to accomplish its strategic objectives.*”

Senior military leaders, management authorities, heads of large corporations, and others with experience and insight on information management issues have had much to say about knowledge and Knowledge Management, and its importance. For example:

“Knowledge, jealously guarded by an individual, is not power. Quite the opposite, it detracts from the power and effectiveness of the entire organization.”

- *Admiral Harold W. Gehman, Jr., CINCUSJFCOM*

“Knowledge has become the key economic resource and dominant – and perhaps –even the only – source of comparative advantage.”

- *Peter F. Drucker, “Father of Modern Management”*

“This knowledge asset, that resides within the heads of our associates, will depreciate just like our planet. Equipment depreciates unless it is continually replenished.”

- *Robert Buckman, CEO, Buckman Laboratories*

“With everything dropping out of the competitive equation, knowledge has become the only source of long-run sustainable competitive advantage, but knowledge can only be employed through the skills of individuals. The value of an individual’s knowledge depends on the smartness with which it is used in the entire system.”

- *Dr. Lester Thurow, MIT Sloan School of Business*

“We either get used to thinking about the subtle processes of learning and sharing knowledge in dispersed, transient networks – or we perish.”

- *Tom Peters, Author of “In Search of Excellence”*

“If you think knowledge management is expensive, try knowledge hoarding.”

- *Dr. Robert E. Neilson, National Defense University*

The Essence of Knowledge Management

Intellectual Capital

Intellectual Capital (IC) is the essence of Knowledge Management. It is comprised of three important elements: human capital, social capital and corporate (structured) capital. The distillation of these three types of corporate assets is what yields *Enterprise Knowledge*.

Human Capital (HC) is the combination of knowledge, skill, innovativeness, and the ability of organization’s employees to meet the task at hand. It includes the values, culture and philosophy. HC cannot be owned by the organization.

Social Capital (SC) is the network (interconnected, interrelated chain or system of people, contacts, etc.) that is in place.

Corporate (structured) Capital (CC) includes hardware, software, databases, organizational structure, patents, trademarks, etc.

Culture, Practices, Technology

Knowledge management is a discipline built upon the combination of culture, practices and technology that involves evolutionary – not revolutionary – management of three key knowledge processes:

- ❑ Knowledge acquisition and validation,
- ❑ Knowledge creation, and
- ❑ Transfer and integration of knowledge throughout the organization.

While information is the raw material from which knowledge is produced, Knowledge Management emphasizes – is rooted in – interaction between people. Information Management emphasizes the “library-type” management of information.

According to widely available information published by the *Gartner Group*, KM is a discipline that promotes an integrated approach to identifying, capturing, retrieving, sharing and evaluating enterprise assets.

These information assets may include databases, documents, policies, and procedures as well as the uncaptured, tacit expertise and experience resident in the brains of individual workers.

KM Initiatives and Successes

The examples cited in this document are not intended to be all-inclusive or representative of every KM effort that is underway in the private and public sectors. They are intended to demonstrate that KM is more than just a couple of the latest “buzz words,” and that those organizations who have embraced KM are benefiting from it.

The Private Sector

Corporate America has embraced KM concepts with considerable enthusiasm, recognizing the benefits it can bring to an organization. Some initial assessment accounts suggest that there is potential for a very healthy return on investment (ROI):

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- ❑ *Chevron Corporation* registered cost avoidances of \$140 million annually in refinery operation costs by using KM to identify best refinery practices.
 - ❑ *Xerox Corporation* (“Knowledge Company of the Year – 1999”) formalized a process for capturing “who knows what” in Xerox’s worldwide field service force into a best practice repository, increasing the ability of more than 14,000 technicians to diagnose, solve and prevent equipment problems in the field, anywhere in the world. Xerox has extended many of the insights gained from its service technicians to the groups that produce documentation, manufacture products, and make engineering and design improvements.

Other companies have successfully embraced KM as well. Some of them, and the *desired outcomes* for their respective corporate KM initiatives, include:

- ❑ AMS (American Management Systems, Inc.) – *Nurturing Innovation*
- ❑ The GAP – *Achieving Quality*
- ❑ Ericsson – *Invention*
- ❑ Home Depot – *Productivity*
- ❑ Mass Mutual - *Customer Service*

The Federal CIO Council

Knowledge Management in the Federal Government (and the DoD) today consists of relatively few known and disparate efforts.

However, it is not unreasonable to assume that other efforts are being planned, indeed in their infant stages, consistent with the Federal CIO Council’s Strategic Plan, Objective 1.4: *Build an understanding of relationships to promote KM throughout government.*

The Federal CIO Council Knowledge Management Working Group (co-chaired by the Government Services Administration’s and the U.S. Navy’s Chief Knowledge Officers) have established a number of Special Interest Groups (SIG) to promote the discipline within the Federal Government, and provide avenues for information exchange, including:

- ❑ KM Government Web Site & Technology

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- ❑ KM Training
 - ❑ KM Strategies and Best/First Practices
 - ❑ Chief Knowledge Officer (CKO) Competencies
 - ❑ Legislation & Intellectual Property
 - ❑ Communities of Practice
 - ❑ Program & Strategic Planning Committee

Assistant Secretary of Defense, Command, Control, Communications & Intelligence (ASD C3I)

“Promote the development of knowledge management and a skilled-based workforce throughout DoD.” That is Goal 5 of the ASD C3I Strategic Plan, under which a KM strategy and objectives continues to evolve.

- ❑ Developing DoD Knowledge Management strategies and plans
 - Establishing a KM program and acquiring funding
 - Developing and publishing a KM blue print
 - Documenting KM “best practices”
 - Establishing a KM repository
 - Developing a DoD-wide KM training program
 - Researching/evolving KM standards, methods, and technical solutions
- ❑ Promoting and implementing DoD-wide KM solutions through outreach and assessments

- ❑ Ensuring quality education and training and workforce development
 - Updating existing, creating new Information Resources Management College courses at the National Defense University
 - Updating Clinger-Cohen core competencies

U.S. Joint Forces Command (USJFCOM)

According to *Best IT Practices In the Federal Government, Volume II* (October 1999, Chief Information Officers Council), USJFCOM (then named U.S. Atlantic Command – USACOM) began its award winning Knowledge Management transformation

in December 1995, with a focus on *operational excellence*.

In 1995, General John Sheehan (USMC), then Commander-in-Chief (CINC) of USACOM, believed that a *totally informed* Command would be more productive and efficient and that morale would improve significantly. He knew that commanders and staff officers within the Command must know, and have access to critical elements of information and intelligence in order for them to advise him on the proper course of action for any contingency.

General Sheehan wanted information to filter down to the lowest command level so even Marine Corps privates on his staff would have access to the same information that he did as CINC. He recognized that efficient and effective decision making requires not only extensive information and intelligence, but also the capability to move that information rapidly across the Command.

Therein was the problem: lack of information flow. Several reasons were identified for the lack of information flow including “stovepipe” organization structures, and information hoarding within directorates. Whatever the reasons, Command personnel did not have the benefit of the knowledge of their counterparts across the staff, and the result was that Command military and civilian personnel felt isolated. The solution? *USACOM Knowledge Today*, which became operational in July 1996 (since renamed to *USJFCOM Knowledge Today*). “Push” technology gives all users the same newsfeed at the same time, regardless of rank.

The *Knowledge Today* “internal briefing book” keeps its registered users informed by providing operational and intelligence information, news, announcements, meeting minutes, schedules and other postings. The news page averages more than 45,000 hits daily, and anyone with secret-level clearance and access to the secure SIPRNet can log on.

A side benefit of *Knowledge Today* has been the significant reduction in Command e-mail traffic. Action items, task orders, documents and other workflow items are posted for everybody at USJFCOM to read, so that back-and-forth e-mail is not as necessary. Desktop computers for more than 1,100 intranet users are equipped with interactive Web server applications which enable them to post information directly to *Knowledge Today*.

At USJFCOM, the exchange of ideas and information across the staff, both horizontally and vertically, is encouraged. Indeed the importance of sharing knowledge across USJFCOM today is perhaps best summed up by its current Commander-in-Chief, Admiral Harold W. Gehman, Jr.:

“You will be judged here by how well ‘your information’ was utilized by the organization; not by your cleverness in obtaining it.”

In recognition of its being one of the best intranet sites at achieving its organization's information objectives, *USJFCOM Knowledge Today* has won CIO Magazine's *CIO Web Business 50/50 Award* for three consecutive years (1997 – 1999).

Department of the Navy

The Navy's Knowledge Management initiative has existed as a funded activity since 1998. An initial workshop conducted in October 1999 was fully supported by Navy leadership, and resulted in a draft vision, overall and organizational strategies.

The Navy's Chief Knowledge Officer (CKO) has undertaken a strategic plan initiative (DON IM/IT Strategic Plan, Goal 4) to “Implement strategies that facilitate the creation and sharing of knowledge to enable effective and agile decision making.” Current KM initiatives include the “CINCPACFLT Homeport,” “Virtual Naval Hospital,” and “NAVSEA Acquisition Reform.”

Department of the Army

The Army's KM initiative – Army Knowledge Online (AKO) – has been a funded initiative since 1998. The AKO's intended beneficiary is the Institutional Army versus the Tactical Army, with the outcome being shared knowledge versus battlefield awareness.

Through a common environment and a leveraged IT infrastructure, AKO gives Army soldiers and civilians the tools required to increase information access, focus collaboration, improve and streamline programs, and overcome geographic, time, and organizational boundaries.

The AKO concept includes a number of pilot projects: Paperless Career Field Designation, HQ DA Knowledge Office, Acquisition Management, and expansion and institutionalization of KM Army-wide.

Department of the Air Force

The Air Force currently does not have an enterprise-wide KM strategy. There are some ongoing KM efforts within the Air Force, but they are disparate in character, without a shared single enterprise focus. It is not unreasonable to conclude that there are additional unpublicized efforts underway by other organizations. Examples from Air Force Materiel Command and Air Education and Training Command are cited below.

As Air Force activities continue to satisfy their local KM requirements by applying different technical solutions against different business processes, there is a great potential for the creation of interoperability problems as knowledge sharing needs increase. It is important, therefore, that the Air Force develop a policy for KM implementation, and an appropriate core set of standards to minimize knowledge sharing problems.

Air Force Materiel Command (AFMC). The AFMC KM approach is a Web-based hub for knowledge sharing called “Air Force Knowledge Management” (AFKM).

It is an initiative of AFMC’s Requirements Directorate, Initiatives Division (HQ AFMC/DRI) that contains best practices, tools, articles, papers, links, lessons learned, and other knowledge nuggets of interest to the Air Force, DoD, and Industry.

AFKM's strategy has been to provide a standard architecture for:

- ❑ Accessing knowledge sources through portals and indexing, categorized by subject area,
- ❑ Providing a repository for orphaned knowledge within the AFKM database, and
- ❑ Advancing knowledge sharing through developing and implementing communities of practice.

Knowledge sharing is leveraged through indexing (by subject, i.e., operations, logistics, support, standardization, command policy, etc.) and cataloging information in multiple databases and other web sites, communities of practice, and orphaned repositories for seamless search through the AFKM site and through Web portals.

Air Education & Training Command (AETC). The AETC effort is focused on both customer intimacy and operational excellence. AETC required the ability to capture, store, catalog and share information within offices, across bases and across the country.

The Business Solution Exchange (BSX) was implemented in AETC to assist in their competitive sourcing program by facilitating “virtual” teaming and information coordination between HQ AETC Program Management Flight and geographically separated activities involved in the Base Operating Support contracts process.

BSX has expanded as an acquisition knowledge warehouse, empowering acquisition professionals to leverage the collective intellectual capital of Air Force Acquisition personnel.

Building A Knowledge- Centric Air Force

People, process, and technology are the essential components of KM. The challenge before the Air Force is how to change people’s behavior and motivate them to share what they know. This will involve major cultural changes.

Of these three components, however, it is most important to focus on the human aspect of KM, recognizing the importance of information technology in providing technical solutions for executing Knowledge Management processes.

There are several actions discussed below that need to occur before KM becomes a reality Air Force-wide, including three recommendations that, if acted upon in the near term, will “kick-start” an Air Force enterprise Knowledge Management program.

Designate An Air Force Chief Knowledge Officer

Recommendation 1: Designate a Chief Knowledge Officer (CKO). As many organizations have discovered (often in

hindsight), it is important for the Air Force to identify and designate a CKO or, at minimum, an appropriate executive-level knowledge management advocacy office, and to provide appropriate funding for KM initiatives.

The ideal solution for establishing the Office of the CKO is the General Services Administration (GSA) model. Under the GSA model, the CKO is on a level equal to the CIO. The reason for that is because the skills and focus required of a CKO are different than those of the CIO: the CKO focuses on the human aspect of knowledge and knowledge management, while the CIO focuses on information and information technology.

For pragmatic reasons, the Air Force should consider designating the new Deputy Assistant Secretary of the Air Force for Business and Information Systems Management as its CKO. It is envisioned that the CKO will have a number of responsibilities, including:

- ❑ Providing the leadership necessary to ensure Air Force KM goals and objectives are achieved.
- ❑ Serving as liaison with other federal agencies and industry partners to facilitate sharing of world class KM practices.
- ❑ Providing policy and guidance on processes for “institutionalizing” KM practices.
- ❑ Developing strategies to make tacit knowledge explicit.
- ❑ Fostering and promoting organizational and cultural changes that facilitate tacit and explicit knowledge sharing and organizational learning.
- ❑ Ensuring KM project workers have defined roles, possess the necessary skill sets, and have the requisite tools to succeed.
- ❑ Developing common definitions to facilitate understanding of knowledge concepts, and champion the development of taxonomy to classify and store explicit information in formats that are easily accessed and used.
- ❑ Developing a KM budget and influence the assignment of resources to those who are eager to experiment with KM in their organizations.
- ❑ Providing KM education and training to the officer, enlisted and civilian workforce on its importance to the Air Force mission, benefits, and use.

Establish An Air Force KM Team

Recommendation 2: Establish an Air Force Knowledge Management team (function) to lead the implementation of the recommendations made in this document, define and oversee a small, flexible and scalable “quick win” KM pilot project based on the knowledge requirements of the warfighter.

The pilot project would incorporate accepted KM principles and frameworks, would be expandable in terms of content, functionality, and communities of interest. It would be conducted in such a way as to facilitate routine growth and eventual “seamlessness” between KM efforts across the Air Force and the Department of Defense.

In addition to those who would permanently assigned to the KM function, it is recommended that pilot project representation also include each of the functional entities represented in GCSS-AF; AFCIC, AFCA, and the organization responsible for standing up the IT infrastructure and providing technical support to the project. It is also highly recommended that the SG and PA communities be called upon to provide representatives skilled in change management methods and marketing, respectively.

Establish Air Force KM Objectives

The Air Force KM approach should include the following objectives:

- ❑ Identify the most important knowledge in each organization and community of interest.
- ❑ Determine where the Air Force is most at risk to "brain drain."
- ❑ Provide for the addressing of KM problems and opportunities.
- ❑ Identify experts (people with the knowledge) internal and external to each Air Force organization and community of interest.
- ❑ Learn how to capture and package knowledge (create knowledge assets).
- ❑ Leverage Air Force knowledge assets.

Develop An Air Force-wide KM Policy

An enterprise Knowledge Management policy will have to be developed; it should address the activities and processes below.

- ❑ Creation and acquisition of knowledge
- ❑ Organization and storage of knowledge
- ❑ Distribution and communication of knowledge
- ❑ Application and use of knowledge standards
- ❑ Accessing value-added knowledge from external sources
- ❑ Use of knowledge in decision making
- ❑ Embedding knowledge in processes, products and services
- ❑ Facilitating knowledge growth through cultural institutionalization and incentives
- ❑ Transferring knowledge to, and sharing knowledge with, other organizations
- ❑ Assessing the value of knowledge assets, the impact of KM, and the effectiveness of KM processes – metrics

Develop A KM Strategy

As organizations independently embark on satisfying their local requirements through different technologies adapted to different processes, there is a great potential for interoperability problems as knowledge sharing needs grow. It is important, therefore, that the Air Force develop a KM implementation strategy that minimizes knowledge sharing problems.

The KM strategy must ensure that warfighters have access to the knowledge they need, when they need it, and in the form they require.

To that end, it is essential that:

- ❑ Ongoing initiatives such as GCCS-AF, GCSS-AF, HAF 2002, etc., be considered and included, that
- ❑ An appropriate KM information technology infrastructure be identified, and that the use of a common technical solution (or suite of tools) be identified and promoted, consistent with the objectives of the JTA-AF, that

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- ❑ “Information Management” be revived, as defined in DoDD 8000.1, Defense Information Management (IM) Program, so that information is treated as an Air Force enterprise asset to support Knowledge Management, and that
 - ❑ Senior leadership and warfighters alike receive education and training on KM, its importance to the Air Force mission, benefits, and use.

When KM has become “institutionalized” across the Air Force and become part of the blue-suit culture the Air Force will be in the best position to:

- ❑ Leverage Air Force knowledge so that the right information is provided to decision-makers in an understandable context, in the timeframe required.
- ❑ Establish a network of knowledgeable Air Force officer, enlisted and civilian personnel who can add value to warfighter information requests.
- ❑ Share lessons learned and best practices across the Air Force enterprise.
- ❑ Achieve knowledge and information superiority over adversaries.
- ❑ Foster and provide electronic access to information-rich pools of ideas, products and services.
- ❑ Facilitate and accelerate the learning process, and creating opportunities for individuals and groups to put new knowledge to use.

Knowledge Management Funding

The estimated cost for “kick-starting” the Air Force Knowledge Management initiative is \$475,000.00. This estimate is based on information provided by the Department of the Army and the U. S. Joint Forces Command.

These funds will facilitate a small, scalable pilot project (which can be expanded in terms of content, functionality, and Communities of Interest), and the development of an “Air Force” portal with linkage to existing knowledge sources.

Conclusions and Final Thoughts

Many enterprises do not “know what they know.” This can frequently lead to duplication of effort throughout an organization;

the Air Force is no exception! Thus, the Air Force must ask itself two questions for which there are no simple, right, or wrong answers:

- 1) What are the Air Force's knowledge assets?
- 2) How should the Air Force manage those assets to ensure it gets a maximum return on them?

Effective management of knowledge should focus on solutions that encompass the entire system that is comprised of organizations, people, and technology. Solutions must also reflect consideration of the type of organization, its culture, and its knowledge needs. It was IBM who provided reminded the corporate world that:

- The firm is not a machine.
- Access does not equal value.
- Perfect information does not equal perfect decisions.
- Do not manage knowledge by buying software; manage knowledge by managing people.
- The most important people in the organization are boundary expanders.
- Behaviors are not changed by technology.

The prime factors impacting the development and sustainment of a successful KM program are strong executive sponsorship, and a sustainment strategy led by a Chief Knowledge Officer.

The extent to which program outcomes are defined, and there is cross-functional involvement in the process are also very important factors. "Quick wins" will be critical to sustaining momentum, while training will be a major factor in achieving a credible, successful program.

If the Air Force adopts the recommendations in this paper, it will be well on its way toward establishing a viable Knowledge Management approach. One that provides warfighters with access to the knowledge they need, when they need it, and in the format they require, in order to achieve desired mission outcomes and information superiority.