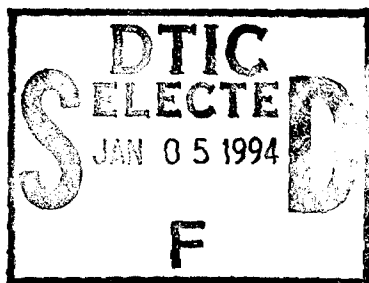


PROFESSIONAL MILITARY COMPTROLLER SCHOOL

IDEA PAPER

TITLE

How DoD Wide ISO 9000 Registration
Will Benefit the CIM Initiative



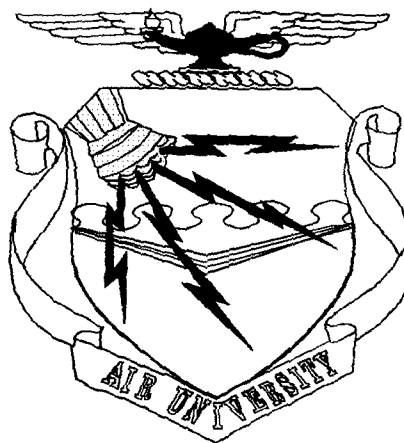
AUTHOR

Cathy L. Bickley
GS-13, USA

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AUTHOR: Cathy L. Bickley

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DUTY ADDRESS: 4940-B Research Drive, Huntsville, AL 35805 **DSN:** 788-4666

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EXECUTIVE SUMMARY

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The CIM documentation techniques and requirements are all excellent analytic tools. These tools, while excellent do not address one primary issue; the limited availability of validated information to use in our Business Process Improvement Program. A CIM team must spend an inordinate amount of time on site to obtain minimal information. Often, functional managers are not familiar with these documentation techniques which makes validation of the documented processes difficult. Without having documented procedures it is extremely difficult for a CIM team to identify similarities and differences in a function. This inhibits the ability to develop standard joint systems.

While "ISO" does not stand for anything, it is an international standard for a quality assurance system. The primary objective of the CIM initiative is the re-engineering of business processes. The ISO 9000 standard will help achieve this objective. In order for a site to receive the registration all current procedures and policies must be documented using common language and formats as prescribed by ISO 9000. This is the key to the entire system. It assures the same process is followed consistently. It also requires continuous updates of the documentation. This is assured by follow up audits.

The audit assures proper implementation of the standard at a site. In order to be registered in the U.S. a site must have an outside Registrar conduct the audit. To assure compliance with the procedures auditors will observe workers. Another technique auditors will use is to watch the employee perform a task or the auditor may ask the employee to explain the process. The auditor will then review the worker instruction manual to verify compliance and proper documentation.

The following recommendations are presented for the consideration of the Assistant Secretary of Defense, Director of Defense Information. They were developed based on the facts contained in this paper. The ISO 9000 standard should be adopted throughout DoD. Registration should be maintained through follow up audits. To help expedite this process DoD should send all auditors and industrial engineers to certification programs. These employees will then be qualified to help develop the required documentation.

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INTRODUCTION

The Corporate Information Management (CIM) documentation techniques and requirements sound like alphabet soup! There are ABC baselines, IDEF models, FEAs, BPIPs, TQM, and on and on. These techniques are all excellent analytic tools (1:3-17). However, they are very difficult to use and require specialized training. The proper use of these techniques will yield very precise results--provided the information required for each of the models is readily available. It has been my experience, little if any documentation of procedures exists in most work centers.

Since there is little or no existing documentation of the current procedures, a CIM team must spend an inordinate amount of time interviewing personnel to obtain minimal information. This information must then be formatted to meet the modeling requirements as prescribed by the CIM DoD guidance. When these models are sent to the work centers for validation additional work is required. Most functional area managers are not familiar with these documentation processes and must have a separate briefing just to read them. All of this time and effort is extremely expensive. For this reason, I propose all of DOD adopt the ISO 9000 standard.

In order to support this statement I will discuss how such a requirement will help us to overcome many existing problems. Next I will discuss the standardized documentation and audit requirements to meet the ISO 9000 quality system standard. Following this I will explain how the follow-up audits will assure the continued maintenance of the documentation. Finally I will highlight how such a system will result in immeasurable benefits throughout DoD.

DISCUSSION

As a management analyst I have conducted many manpower studies, efficiency reviews, and now business process improvements. Usually these studies involve documenting the same function at more than one site. I cannot recall one study that I have conducted, during the past ten years, where the same function has been performed the same way at more than one site. In addition to the differing methods of performing these functions, usually no current documentation of these processes is available. This means extensive interviews must be conducted before any analysis can be performed. Now with the advent of CIM we want joint systems.

Joint systems are the only logical way DoD will be able to share and analyze information. Therefore, we need to be able to identify the minimal requirements for these new systems. The new systems must also meet the functional requirements of each of the users. This can only be accomplished if we can baseline all of the current requirements by documenting them. To conduct interviews at every DoD site performing a specific function is hardly feasible. While this may sound like an overwhelming task, a system exists to help us meet this objective.

This system is the ISO 9000 series. While "ISO" does not stand for anything, it is an international standard for a quality assurance system. Currently this system is being used world wide (3:1-4-1-5). Usually, compliance with the standard is required by a customer before they will consider doing business with a supplier(5:53). The DoD is not exactly a supplier, we are more of a service. However, besides providing a service for the public we also have internal customers whose needs must be met. This quote from one of our internal customers, COL Vanairsdale, USA, Chief, Program Budget Division, Resource Management, G-8 FORSCOM highlights this need "We must reorganize how we do business at the installation, we must RE-ENGINEER our processes in order to reduce our costs."(6:-)

Re-engineering of business processes and organizations is the primary objective of the CIM initiative (1:7). That is exactly what ISO 9000 registration will expedite for us by providing us with the vehicle for change. In order to obtain ISO 9000 registration a site must establish a quality assurance policy in writing. Next, the site must document all current procedures being used. The standard calls for common standard language and formats for the documentation(3:1-3). This is the key to this system. It is the same format no matter what type of company or operation you have. The purpose of documenting these procedures is to assure the same process is followed consistently. Some folks reading this may say this will stymie innovation--not so! All that is required when a new process evolves is to document it, so others in the organization can follow suit.

We seem to have so many different procedures and policies to follow it is difficult for a new employee or manager to sort out what is required. Especially today, we are always trying to identify new and efficient ways of conducting business. Recently we have dropped the requirements for many regulations and policies. This is good, but it can create different levels of quality for our products. Depending on where the function was performed can affect the quality of the product produced (4:66). This is where the problem begins for those of us trying to develop migratory systems.

In order to assure that employees at a site know what is required and how the process is to be performed the ISO 9000 system requires addressing quality elements. These elements include:

- Management Responsibility
- Quality systems
- Contract Reviews
- Design Control
- Documentation Control
- Purchasing
- Purchaser Supplied Product
- Product Identification and Traceability

Process Control
Inspecting and Testing
Inspection, Measuring and Test Equipment
Inspection and Test Status
Control of Nonconforming Product
Corrective Action
Handling, Storage, Packaging, and Delivery
Quality Records
Internal Quality Audits
Control of Production
After-sales Servicing
Training
Statistical Techniques (5:57)

Just imagine how easy it would be to have consistency across a site if these elements were all addressed in the process manuals and policies in a consistent fashion at a site. Better yet, imagine how much easier it would be to perform analysis across several sites if you could request copies of this documentation. This would result in savings of TDY and lost work center productivity. This would be a much less obtrusive method. An analyst could readily identify similarities and differences. This definitely would enhance the development of migratory systems across DoD. It would also lead to truly joint systems.

Under the current method, a CIM team identifies and documents a process. However, it is difficult to know if this is the process the work center is following. Usually, a CIM team only has time to conduct several interviews. Very seldom do we have the luxury of observing someone performing the function. The people in these work centers are also constrained by time and frustrated by repeated interviews. Routinely there are Internal Control audits, manpower reviews, efficiency reviews, Inspector General reviews as well as a sundry of others. This all takes away critical time that could be devoted to production.

Just think, if one system could formally document and verify what procedures a site performs and assure the site follows these procedures consistently. As part of the ISO 9000 registration process a mandatory audit is

required. The auditors review quality manuals, procedures documentation, work instructions, and quality records (2:61).

In order to be registered in the U.S., a site must have an outside Registrar conduct the audit to award registration. This is an area that will need careful review. Standards in the U.S. for these Registrars are limited (3:1-4-1-5). It is therefore recommended that any U.S. Registrars be accredited by the Registration Accreditation Board (RAB) (4:66). There are also European accreditation boards which are recognized throughout Europe. In the U.S., certification programs exist (3:1-11-1-13).

Preferably the documentation should be developed by in-house personnel with the assistance of a trained leader. This leader should also be in-house personnel to help hold down costs. Consultants can be extremely expensive and have limited experience with ISO 9000 registration requirements (4:66).

An outside auditor, called a Registrar, will conduct an on-site audit of documentation and observe actual performance. To assure compliance with the procedures auditors will observe workers. Another technique auditors will use is to watch the employee or ask the employee to explain the process to the auditor first. The auditor will then review the worker instruction manual to verify compliance and proper documentation. These audits must be repeated every three to four years. Ideally, to implement ISO 9000 standards requires in house audit capabilities as well. This will help to assure compliance before the Registrar conducts their audit (5:72).

It would be beneficial if DoD looked ahead and began sending auditors and industrial engineers to auditor certification programs. This will help implement the standard even if registration is not sought. However, the Department of

Defense is considering replacing MIL-Q-9858A and MIL-I-45208A quality system standards with ISO 9000 (5:54). Such action will require many of our suppliers to comply. It seems logical we should also comply.

If many of our suppliers' processes and procedures are documented for our review, then ours should be documented as well. This will expedite comparisons of their manufacturing system with our management and distribution systems. This could eliminate a significant amount of rework in the future.

Many companies already registered are claiming benefits from using the system. Companies such as DuPont, and Allen-Bradley are citing reduced defects, and decreased cycle time since implementing the standard. At one DuPont site employees claimed defect rates dropped from 30% to 8% as a result of participating in the ISO 9000 process. At an Allen-Bradley site productivity improved by 21% and defects dropping by as much as 32% (4:65). Another significant benefit is improved communications throughout the site. At American Saw in East Longmeadow, Mass., a manager claimed communications improved and accident rates were reduced as a direct result of meeting the ISO 9000 standards (5:71). All the mandatory documentation highlights differences and similarities. Now different departments, even different sites, have a vehicle to use to communicate effectively with each other.

The CIM initiative will definitely benefit when DoD adopts ISO 9000 standard. The ISO 9000 standard looks at the entire manufacturing system. The system focuses on the entire process by "looking at it layer by layer and looking to see if it really is coordinated or if there are stand-alone departments that don't integrate with anybody else" (4:67). This system allows management to find out who is not in the loop.

CONCLUSION

By adopting the ISO 9000 standard, we in the business of re-engineering or auditing work centers will benefit. There will be less time spent on-site collecting information and more time spent analyzing the information. The net results will be: improved procedures, new effective integrated information systems, and streamlined organizations as a result of the audits. All of these desired results can be achieved when we implement a standard quality system, that will help achieve consistent results.

The DoD can be effective and use improved business processes by getting in line with the rest of the world and adopting ISO 9000 standards. By having such a comprehensive standardized process we as analysts will be able to spend more time using our analytic tools and less time trying to obtain and verify the information input into our models. Accurate, current information is the key to success--not the requirement to use specified tools.

RECOMMENDATIONS

These recommendations are presented for consideration by the Assistant Secretary of Defense, Director of Defense Information. They are based on personal experience and an analysis of the current literature cited in this bibliography.

1. Recommend the adoption of ISO 9000 standards throughout DoD. Every installation and activity should implement this standard immediately. Many benefits will be realized when we have current validated information of all of our business processes readily available for analyses.

2. Maintain ISO 9000 registration or compliance by conducting follow on audits at prescribed intervals of time. This will assure workers are maintaining the documentation and all procedures are current.
3. Send all DoD auditors and industrial engineers to recognized ISO 9000 certification programs. These trained professionals can help functional area employees prepare the required documentation for ISO 9000 registration. They can also serve as internal auditors if we elect to simply follow the standard rather than be registered.

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