Producing Dollars from ISO 9000 Based Quality Systems

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In the last several years many companies have responded to their customers', industries' and their internal desire for improvement by installing ISO 9000* based quality systems. The reasons for implementing these systems vary and so do the results. The pride of accomplishing registration often is not accompanied by improved operations or profits. Key individuals within the organization have additional work loads. Every so often operations are interrupted by audit preparation. Documentation and operating rules are often more obvious than improvement.

> * ISO 9000 based standards include QS-9000, AS-9000 and less directly ISO 14000 systems.

Your expectations may have exceeded your measurable results. In frustration you may have thought this ISO stuff isn't all that its supposed to be. Maybe this is just another quality method of the month. Is this like quality circles, SPC, TQM and other quality initiatives? If you are considering looking for something or someone to blame, the ISO 9000 based standards may be poor candidates.

Identifying the Problem

Several things may have happened between your decision to install a 9000 based quality system and registration. All the normal things like lack of commitment, poor system design, lack of resources and poor communication will prevent your system from performing as well as it could. Typically, everyone feels they were committed, assigned resources, communicated well and tried to do the right things. Significant resources were committed to training and implementation and the results may still be suspect. Obviously, no one problem is everyone's problem. There are a few problems that seem to accompany the majority of systems that fail to meet their promise. These are some of the problems I have encountered in lifeless systems;

- \# misunderstanding ISO based systems
- \# ignoring system concepts
- \# failing to design a system
- \# not integrating the system into the organization
- \# selecting mediocre system goals

A Look at 9000 Based Systems

If someone were to ask you, AWhat is an ISO 9000 based system?≅ how would you answer? The common answers are Aa quality system≅, Aan international quality system model≅ and Arequirements for a quality system.≅ Some of these answers may be better than others but none explain anything about the required or implied structure or benefits.

In our consulting and training activities we have considered this question and its common answers. We have come to the following conclusions;

1. ISO 9000 systems are not quality systems. Primarily ISO 9000 based systems are social business systems that are applied to quality activities.
2. The standards do not provide a model for a system within the requirements. Guidance documents provide some help in this area but since they are not part of the requirements they are often ignored.
3. ISO 9000 requirements are minimum requirements that a quality system must meet not sufficient requirements for high performance. There are only vague requirements for system efficiency and effectiveness and integrating the system in your company.
4. The system definition implied by ISO 9000 based requirements describe a system that is a prescriptive, specification based, self-identifying, verification system.

Together the previous four items don't seem to help much. If we assume they are accurate, we still don't know exactly what to do about them. So far we have failed to answer the, ASo what?≅ question. But if we ignore these things we are sure to have problems making our system profitable. Its useful to remember that what we are doing is creating a system. It will be helpful to consider some requirements and implications of systems.

Some Truths About Systems

Lets start with a definition of systems.

> AA system is the organization and interrelation of several components for a specific purpose(s) where each of the components are required to achieve the purpose(s).≅

What this means is, ASystems are defined and evaluated by external goals.≅ Notice systems are the interrelation of several components (in our case documentation, records, auditing, training, corrective action, management review, etc.) for a specific purpose. What were the external goals identified when you designed your system? The desire for an ISO system only provides one goal, AMeet the registration requirements.≅ If you did not provide other specific goals, you may be getting all you asked for.

We said before that, AThe standards do not provide a model for a system the requirements.≅ If that's true, just meeting the requirements will not provide a 'system'. Systems are not collections of loosely related quality activities like the ISO requirements 4-1 to 4-20. A collection of quality related activities may well result in registration but it cannot provide the foundation for accomplishments that are neither identified or required. Your ISO system is a little like children. If you give them something worthwhile to do, they can do remarkable things. If you give them nothing to do, its hard telling what they will do. If we want better system performance, we have to start with better goals.

A second and murkier concept is that systems resist trouble-shooting. Systems are defined by the

interrelationship of the components. Trouble-shooting separates the components and analyzes the component. When removed from the context of the system, an improvement in a component does not necessarily improve the system.

Consider a car. It is a system made up of components including the body, the engine, the transmission, the drive train and the brakes. They all work together. If you decided to increase the traveling speed by improving the engine, doubling its horsepower, it would likely be the source of a system failure. Stomping on the gas will probably destroy the transmission or the drive train, not increase the traveling speed. Systems are improved by redesign considering the contribution of all the components not by trouble-shooting the components individually.

If you designed your ISO 9000 system without considering the interrelationship of the individual elements, it probably cannot work effectively. And, anything you attempt to do to repair it may be counterproductive. If you expect to profit from your quality system, you must design it to work as a system to accomplish defined goals.

Learning to Love Your System

Earlier we said that an ISO 9000 requirements describe a system that is a prescriptive, specification based, self-identifying, verification system. We should look at these fundamentals and decide if we like them or if they are likely to go away. If they won't go away, we must learn to love them and use these fundamentals as tools for improvements.

The first term we used is prescriptive. Prescriptive simply means writing down your intentions before you take action. Its that documentation stuff. Documentation will be hard to love, maybe we can make it go away. But before we make it go away lets consider if its a good idea. Is it a good idea to write down what you intend to do before you do it? Well, it certainly is not the only way to do things.

As a matter of fact, in the United States we are very proud of our pioneer heritage. We go out to the frontiers, whether they are frontiers of profit or productivity, and we do battle with adversity. If things don't go well we get together, figure out what's wrong, change some things and go at it again. Ready, aim, fire! It makes us quick to the market, supports our native creativity, feels natural and fits with our cultural opinion of ourselves. However, when things are really important like space exploration, atomic energy plants, and national defense we tend to be precise planners working from written instructions and well considered goals. Secondly, ISO 9000 based systems seem to be gaining in popularity. There are new ISO 9000 based standards every few months. ISO 9000 based systems are not the only way to achieve quality by any means. But they do seem to be the only types of quality systems that have wide recognition. So, documentation is not likely to go away. We better learn to love it. If that's not possible we must at least plan to learn how to use these documentation requirements to meet our goals.

The second item is specification based. Our ISO 9000 system is designed to ensure that product conforms to specified requirements (specifications; ISO9001, 4.2.1 1st sentence). Since this is

the purpose of the ISO 9000 based systems, its not going away either. I personally can't imagine how we could or why we would want to avoid specifications. To make our system effective we must focus on the specifications and make them a central part of all of our activities. Not just customer specifications but also industry specifications and the specifications we impose on ourselves.

The third item is self-identifying which means the system is constructed to generate reports of failures that represent things not going as intended. These are nonconformances. Nonconformances are not bad things, they are mostly neutral. The simply represent things that did not happen the way we indicated they should when we made our plans. What we did might be wrong or not. Alternatively, we may have described the activity incorrectly or did the comparison inappropriately. Instead of avoiding nonconformances as so much bad news we must embrace them as a central part of feedback system that identifies that all is not well. To maximize the performance of our system we will want to identify new methods of defining when to initiate nonconformances.

Finally, the forth description of our system is a verification system. Verification is simply the act of checking that we are doing what we planned. On the surface this seems to be an eminently logical thing to do. Some verification is done by outsiders which is not completely comfortable. But, if we limit their access to proprietary and financial matters, external auditing shouldn't be much of a problem. In fact we will want our system to be ready for auditing always and use auditing as an appropriate tool to assure we follow our plans.

The system we are going to be required to have to meet ISO 9000 requirements uses and requires these basic tools. To profit from our system, we need to make a habit of using these tools to accomplish some goals that lead to profit in our organizations. That is, establish quality objectives for the quality system to accomplish that lead to profits.

Planning for Profit

Our system must be sensitive to goals that change. Continually improving profitability is an elusive target. After we reduce waste to some level, further reduction may not be profitable. Our goals have to change to address other areas that can increase our profits. Our system must reevaluate our company goals, our quality policy and our quality objectives on a regular basis. If you created a quality system to meet the ISO 9000 based requirements, you may not have considered goal evaluation as part of your system. The only goals were in the requirements and the management representative will surely hear if the ISO 9000 based requirements change. With no other goals, review may be a static function considered when the system is started. Our goals for profitability are going to be much more dynamic. By adding a planned review of company system goals our business system will allow us to be as dynamic as our business. The following model is a quality system model that incorporates the concerns we have discussed.

COMPANY - QUALITY SYSTEM RELATIONSHIP MODEL
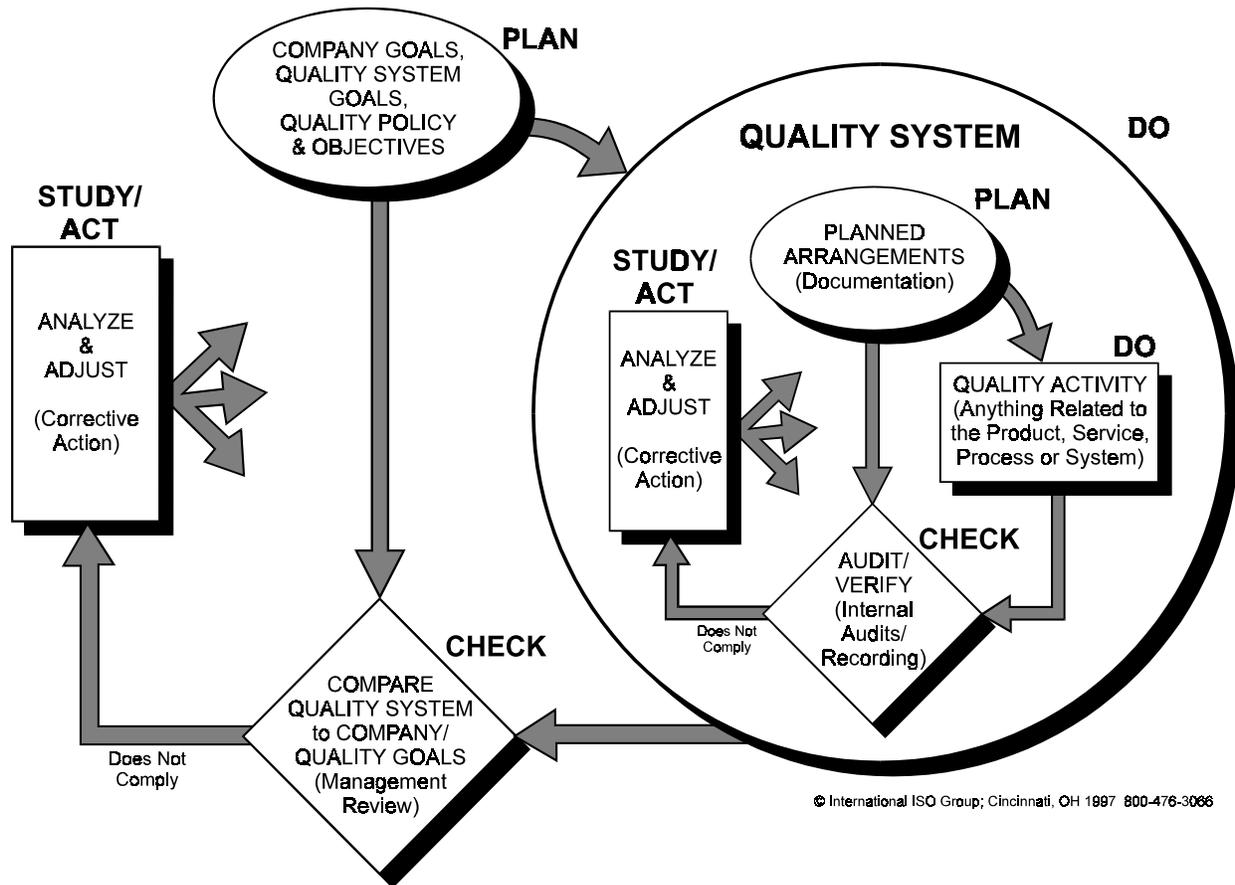
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This system model integrates the quality system within the company. In doing so it agrees with research done years ago in the US and Japan. Examining over 200 quality methodologies the research came to a simple, elegant conclusion. Quality methodologies that were integrated into the company were successful. Quality methods that were treated as activities were not. This specifically applies to your quality system. You must make the transition from Ayour quality system activities' being things you do≅ to Ayour quality system is the way you do things.≅

The Plain Truth

Recently I attended a quality presentation given by Peter Scholtes, a colleague of Dr. Deming. He made the observation, AOne mistake we keep repeating is to try to find simple solutions to complex problems.≅ This same idea was expressed by Einstein when he said, AThings should be kept as simple as they can be, but not simpler.≅
Everything I have suggested to make your system profitable is considerably more difficult than achieving registration. Setting goals for your company and your quality system is difficult. Designing a system that attends to, accomplishes, and identifies problems is very difficult. Making your documentation help you achieve your goals is a real challenge. If we don't do these

difficult things we will be stuck with a quality system that has significant overhead with little likelihood of profit. The quality system we want, the one that by design supports and tracks profitable activities will probable require more up-front work that your registration effort. For some reason, things that are easy to do, are hard to live with. And, things that are hard to do, are easy to live with.

About the Author:

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