



# CMMI® Version 1.2 Appraisals and ISO 9001 Appraisals/Audits

➔ **How to do them In One Fell Swoop**

**Or: How do we do this in order to save time and money?**





# **CMMI® Version 1.2 Appraisals and ISO 9001 Appraisals/Audits**

**➔ How to do them in one fell swoop**

## **Why do this?**

**Many corporations are ISO Certified, but want to get to CMMI Maturity Level 3 for contracts and competitive advantage. Other companies want to see their products overseas, and ISO Certification is required**



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➔ **Why do this? It can be done!  
Without Fear of Disaster!**



**There are many similarities between the CMMI-Dev 1.2 and ISO 9001.**

**The book that can be used to look at the similarities and differences is: *Systemic Process Improvement Using ISO 9001:2000 and CMMI* by Mutafelija and Stromberg**



# CMMI® Version 1.2 Appraisals and ISO 9001 Appraisals/Audits

**How do we go down this road and merge the requirements for the Standard and the Model?  
How do we make sure that we are not going down a blind tunnel without direction?**





# **CMMI® Version 1.2 Appraisals and ISO 9001 Appraisals/Audits**

**There are Prerequisites to performing an Appraisal/Audit in an organization:**

- 1) Education**
- 2) Application of the Necessary Knowledge**



# CMMI® Version 1.2 Appraisals and ISO 9001 Appraisals/Audits

➔ **Education: is the key: educate your folks!**



**If you are ISO 9000 Certified you already have an internal audit group (8,2,2), also if you are CMMI Maturity Level 3, you are performing many of the practices in OPF.**



# CMMI® Version 1.2 Appraisals and ISO 9001 Appraisals/Audits

## ➔ Resources for Quality and Process

### ISO 9001 States:

Section 8.2.2 Internal Audit, of the Standard reads “the organization shall conduct internal audits at planned intervals to determine whether the quality management system a) conforms to the quality management system requirements and b) is effectively implemented and maintained.



# **CMMI® Version 1.2 Appraisals and ISO 9001 Appraisals/Audits**

## **How to do them in one fell swoop**

### **➔ Resources for Audits**

**Audits have to be planned, with the processes and areas to be audited identified, as well as the previous audit results.**

**Actions have to be taken to answer the nonconformities found during the audits along with their causes. Audit criteria, scope, frequency and methods are to be defined.**

**Name 2 Process Areas that relate to these activities.**





# **CMMI® Version 1.2 Appraisals and ISO 9001 Appraisals/Audits How to do them in one fell swoop**

## **➔ Activities for Process Improvement**

**For OPF, the purpose is to ‘plan, implement, and deploy organizational process improvements based on a thorough understanding of the current strengths and weaknesses of the organization’s processes and process assets.’**



# **CMMI<sup>®</sup> Version 1.2 Appraisals and ISO 9001 Appraisals/Audits**

## **How to do them in one fell swoop**

### **➔ Activities for Process Improvement**

**In OPF, the responsibility for facilitating and managing the organization's process improvement activities, including coordinating the participation of others, is typically assigned to a process group. The organization provides the long-term commitment and resources required to sponsor this group and to ensure the effective and timely deployment of the improvements**



# **CMMI® Version 1.2 Appraisals and ISO 9001 Appraisals/Audits**

## **Where am I going with this when I say ‘Educate’?**

### **➔ Understanding the Standard**

**Ensure that those performing internal audits have had training on the ISO Standard and also understand how to audit**

### **➔ Understanding the Model**

**Ensure that those who work with PPQA and OPF, should take an Intro to the CMMI class or equivalent.**



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- ➔ **The Resources that are required for the ISO Standard can be the same resources required for the model.**



**The resources (People, time, \$) used for both the Standard and the Model can be combined to be the same group. Leverage the intellectual capital in your organization. Use the people's brains!!!! Do not create two different groups to perform the same function!**



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## ➔ Application: An Example

### Quality Manual

Requirements for a Quality Manual per Secti Standard:

**A Quality Manual must exist. It must contain all documented procedures that have been established to cover all the procedures for the Quality Management System (QMS).**





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## ➔ Application: An Example

### Quality Manual



The manual covers the scope of the QMS, including details and justification for any exclusions.

The manual covers descriptions of the interactions between the processes of the QMS.



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## ➔ Application: An Example

### Organizational Process Definition



#### SG 1 Establish Organizational Process Assets

SP 1.1 Establish Standard Processes

SP 1.2 Establish Lifecycle Model Descriptions

SP 1.3 Establish Tailoring Criteria and Guidelines



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## ➔ Application: An Example

### Organizational Process Definition = Quality Manual



If you have implemented OPD and/or have a Quality Manual, you most likely have satisfied both the model and the standard.





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➔ **Application: Bottom Line Organizational Process Definition = Quality Manual**



**Do NOT produce another set of procedures for you ISO or CMMI effort if you ALREADY have procedure in place.**

**Make what you have work for you. Do not do more work than you have to.**



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## ➔ Application: An Example

### Training: Model Requirements for Organizational Training

The purpose for OT is: to develop the skills and knowledge of people so they can perform their roles effectively and efficiently.



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## ➔ Application: An Example

Informative material from CMMI v1.2, OT:

An organizational training program involves the following:

- Identifying the training needed by the organization
- Obtaining and providing training to address those needs
- Establishing and maintaining training capability
- Establishing and maintaining training records
- Assessing training effectiveness.



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## ➔ Application: OT SGs and SPs

### SG 1 Establish an Organizational Training Capability

-SP 1.1 Establish the Strategic Training Needs

-SP 1.2 Determine Which Training Needs Are the Responsibility of the Organization

-SP 1.3 Establish an Organizational Training Tactical Plan

-SP 1.4 Establish Training Capability

### SG 2 Provide Necessary Training

-SP 2.1 Deliver Training

-SP 2.2 Establish Training Records

-SP 2.3 Assess Training Effectiveness



# CMMI® Version 1.2 Appraisals and ISO 9001 Appraisals/Audits

## ➔ Application: 6.2.2 Competence, awareness and training

Organization shall

a) determine the necessary competence for personnel performing work affecting product quality (SP 1.1)

b) provide training or take other actions to satisfy these needs (SP1.2, 1.4)

c) evaluate the effectiveness of the actions taken (SP 2.3)



# CMMI® Version 1.2 Appraisals and ISO 9001 Appraisals/Audits

## ➔ Application: 6.2.2 Competence, awareness and training

Organization shall

d) ensure the its personnel are aware of the relevance and importance of their activities and how they contribute to the achievement of the quality objectives, and (SP1.4)

e) maintain appropriate records of education, training, skills and experience (SP2.2)



# **CMMI® Version 1.2 Appraisals and ISO 9001 Appraisals/Audits**

**➔ Now the answer you have all been waiting for:**

**Appraisals:**

**SCAMPI A,B,C?**

**Internal Audit by your folks, or external by your Registrar?**

**What are your needs?**



# **CMMI® Version 1.2 Appraisals and ISO 9001 Appraisals/Audits**

**➔ Now the answer you have all been waiting for:  
Appraisals/Audits:**

## **Where are you in your implementation?**

**SCAMPI C: only one person necessary who can do the Internal ISO Audit as well as a B,C Team Leader**

**SCAMPI B: a team of at least 4, all having the team requisites and all being internal ISO auditors**





# **CMMI® Version 1.2 Appraisals and ISO 9001 Appraisals/Audits**

**➔ Now the answer you have all been waiting for:  
Appraisals/Audits:**

## **Where are you in your implementation?**

**SCAMPI A: Of course a Lead Appraiser, who is also an internal ISO auditor (at least), and one representative who is from the Registrar (having attended the approved SEI intro class).**



# **CMMI® Version 1.2 Appraisals and ISO 9001 Appraisals/Audits**

**➔ How to do them in one fell swoop**

**Example:  
A Tool to help you put it all  
together.....**