



Bullet Proofing CMM Appraisals (Part 1)

Recommended Best Practices for use on CBAI PI , People CMM Assessment and SCAMPI Appraisals

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Abstract

Best practices resulting from the use of the family of different CMM Appraisal Framework (CAF) compliant methods such as CMM Based Appraisal for Internal Process Improvement (CBAIPI), People CMM Assessment and Standard CMMI Appraisal Method for Process Improvement (SCAMPI) is presented in what follows.

The recommendations made in this paper are based on experience and have been found to be of immense use on assessments or appraisals conducted by SITARA. Twelve bullet proof techniques including a couple of checklists and an appraisal plan template are being shared and reported in this paper.

1. Conducting a Class B assessment at least 3-6 months prior to a formal Class A

PROBLEM: Most Class A assessments are done without a Class B assessment since formal registration of results from Class B assessment is not required. This only means that 'continuity of purpose' behind process improvement is established only as a gut reaction from the assessment team.



PROPOSITION: Class B assessment must occur 3-6 months prior to a formal Class A assessment. And further, results from such a Class B assessment can be examined by the assessment team during a Class A to prove beyond reasonable doubt that ‘strengths’ remain as ‘strengths’ and weaknesses, if any have been addressed using appropriate action plans. Without this measure, CMM assessments will become more of a level-chasing exercise with only a, me-first intent. Real intent behind a CMM assessment should be to make sure that the process culture leading toward core competency development and the right process orientation is institutionalized into the guts of the organization based on a study of how well organizational process assets sustain and behave over ‘elapsed time’. And it should be more than adequate to keep this elapsed time to be between 3 to 6 months. It is very important to make CMM assessments take the view of being a ‘process capability diagnostic tool’ rather than a level awarding exercise. Currently it is a level awarding exercise since sanctity to how well the process behaves and endures over ‘elapsed time’ is not even considered.

2. What should be the rigor of a Class B assessment?

Use of an Assessment Survey Questionnaire (ASQ), such as SITARA’s model specific CMM Assessment Survey Questionnaire for conducting a Class B assessment:

PROBLEM: Most respondents to the full-length People CMM assessment questionnaire feel that the survey is too long and does not hold the respondent’s interest. This feeling is best appreciated since most individuals who respond to the survey are neither trained on the model nor on the jargon used in the People CMM framework. Oftentimes we even see that there is a big enough standard deviation on the responses received even though the average supports the practice as a, strength. The average may be indicative of strength, but based on the large standard deviation since such perception is not uniform it might as well be a clear indication of a weakness. Assessment teams that use the survey analysis would therefore not have a strong indicator to base their initial perceptions of the site’s process capability. We have even seen People CMM questionnaire being abandoned mid-way by about 40% of the respondents. The general feedback is that a ‘crisp’ survey-based rather than the People CMM model based questionnaire is more useful.

PROPOSITION: Questions from SITARA’s model specific CMM Assessment Survey Questionnaire (Ex., SITARA CMMI ASQ, SITARA People CMM ASQ), used on mini-assessments conducted by SITARA have been found to be of great value. The assessment survey questionnaire uses descriptive types of questions to probe the organizational pulse on the interpretation of the process. This may be used for



conducting a Class B assessment. This survey restricts the number of questions to at most 2 to 5 questions per process area of the CMM model that is being appraised against. Depending upon the scope of the assessment, the questionnaire has been designed to ensure that total time to answer it should not exceed 1.5 hours with a level 5 scope. Surveys which are longer than 1.5 hours are not of much use since answers tend to be vague and seem to be given more out of frustration just to complete the survey. Since the proposed Class B assessment is driven more by a survey, it does not bog down individuals with having to set aside time for detailed interviews. Even in high maturity assessments, it becomes difficult for the right individuals to be scheduled into an interview. [For more information on SITARA's model specific CMM Assessment Survey Questionnaire: please contact SITARA Technologies from the coordinates available at: <http://www.SITARATECH.com>.]

Script Questions based on Assessment Survey Questionnaire analysis:

PROBLEM: Not using Class B assessment results to understand site practices before a formal Class A assessment restricts factual understanding of the process.

PROPOSITION: It would be very useful to examine results from the Class B assessment and feed it as an input to script questions for the formal Class A assessment. Since SITARA's model specific CMM ASQ is not objective type, but actually requires individuals to write descriptive answers, it permits a good visibility into the state of practice. The Class B does not require much face time with the respondents since much of the data will be available in the survey. Face time, if any would be required from the process owners and from individuals only if additional clarifications are necessary.

Document Review:

PROBLEM: Currently, the role of document review is to be inclusive of all projects in the organization since there is no guideline from the SEI. It also includes all of the process documents available in the organizational process asset library.

PROPOSITION: For a Class B assessment, it is better to probe 'a couple of projects' chosen randomly 'in depth' for both process implementation indicators and with specific use of process tailoring. And, the remainder of the projects can be probed to span the complete life cycle followed in the organization based on the life cycle that is being executed by the project. If projects in the organization have different project life cycles, then all such projects must go through an 'in depth' examination of both process implementation indicators and specific use of process tailoring. And scripted questions



should now orient the assessment team to understanding from the practitioners how specific aspects of the practice implementation indicators and the process have been found to be useful rather than merely for 'corroboration' of facts as having seen once and heard twice.

Since the intent behind a Class B is not to obtain coverage on the CMM model there could be a reason for having insufficient information to rate the goals. Class B must ensure 'institutionalization' of practices is consistent. At least all of the institutionalization practices must have a clear understanding in the organization and must be visible as practice implementation indicators supported by process assets.

One of the best ways to ensure that results of documentation review are used effectively on the assessment is to establish separate review reports organized per process area. In other words, if the scope of the assessment is to examine 10 (key) process areas of the CMM model, then establishing 10 separate documents which will document only the relevant assessment observations in them is useful since these documents can effectively be reused in coming up with the assessment findings. Besides, this practice ensures that exhaustive documentation review can be conducted without an explosion of records of such reviews. They will all be logged in as many documents as at most the number of (key) process areas in scope.

Focus on weaknesses:

PROBLEM: Scope of conducting a Class B is not defined.

PROPOSITION: Class B assessments have to be formalized from a point of view of ensuring that the ensuing Class A assessment establishes the degree of satisfaction of institutionalization practices. If done with the help of the proposed SITARA's model specific CMM ASQ, it is more than likely that key issues with the process can be highlighted as weaknesses or opportunities for improvement. Class B assessment results can then be used as inputs for the more formal Class A assessment to identify how the follow-on action program works in the organization.



3. Selecting interviewees and structuring interviews for the Class A Assessment

Interviews:

PROPOSITION: For a Class A assessment, a good rule of thumb is to interview at least 30-40% of the organization to get a practitioners view of the process. Class A must ensure that the site offers at least 25% of the assessment participants who have not participated earlier in the Class B appraisal or assessment. What is very useful is, to front load the assessment with interview sessions. Having at least 4 interviews on the first day and 3 interviews on the second day is a good way to ensure that there is a very good likelihood for corroboration. We will explore this likelihood, next.

4. How to ensure bullet-proof corroboration

One of the most useful techniques is to ensure that there are at least 4 interviews each lasting about 1.5 hours on day 1. The key process areas that are in scope for investigation must be explored in such a way that at least two interviewees will get an opportunity to address practices of the same key process area. This is an effective way to ensure that enough insights on the site's practices can be obtained with an excellent chance for obtaining corroboration-to hear about practices from at least two independent data gathering sessions or sources.

After the interviews are concluded, use the first day's data consolidation session to identify both, process discontinuities and potential areas to probe further. And the assessment team should now script these questions for the second day's interviews. This is by far the best way to ensure that the assessment scripts are kept live and relevant on the assessment. Keeping a static script of questions developed at the very beginning of the assessment is a very ineffective way to approach the assessment. Such a method strips meaning of the assessment away from considering realities on ground and focuses only on ensuring compliance to the practices of the CMM model. In my opinion, such a view of the assessment or appraisal which is concerned more to ensure compliance to the CMM practices and not to ground realities which might highlight alternative practices is a text book style of conducting an appraisal. Offering real value and meaning to the business from an appraisal is possible only if the scripts can go after information obtained from practitioners. Normally, scripts are based on initial document reviews and maturity questionnaire assessment, which are performed as pre-onsite activities.



The same strategy can be applied on the second day where at least 3 interviews each lasting about 1.5 hours can be planned. This time around the key process areas which were not addressed adequately on the first day can become the focus for the interviews. This is again the only best known technique to ensure that corroboration of assessment information is made possible.

When such a strategy is used to facilitate and enable corroboration, it is very unlikely that there is ever a need for a follow up interview session or that there will even be an occasion for a need to explore the 'information needed list or INLs' as they are referred to.

It is needless to emphasize the need for effective mentoring and steering of the appraisal by the assessment team leader using the above strategy, in order to make the process of establishing corroboration bullet-proof.

[TO BE CONTINUED ...]