

High Maturity Behavior: Looking Beyond SCAMPI Class A for Clues

Raghav S Nandyal

Chief Executive Officer

raghav_nandyal@SITARATECH.com

AGENDA

- Establish the Context
 - ▶ Most recent 6 years
 - ▶ ~15 high maturity appraisals
- Characteristics of High Maturity Behavior
 - ▶ Looking beyond a SCAMPI Class A
 - ▶ What cannot be represented in a PIID!
 - But, are common characteristics or behaviors embodied in stakeholders
 - **“What-meets-the-eye-first”**, even before the process speaks
- Conclusion

Establish the Context

Any organization can be a level 5 for just 5 minutes
... with the right manipulations!

We will establish a collective understanding of what the 'necessary' and 'sufficient' conditions are in order to sustain at a level 5 for more than 5 minutes

Exploring the 13 typifying high maturity behaviors discussed, is important in addition to fulfilling the requirements of an appraisal method because

- It is difficult to establish: 'Just-by-how-much' did the process get better as a result of a change or process improvement
- Has to be learnt first-hand, often through failures

Establish the Context

The whole organization can't get better overnight

- But it can start getting better, piece by piece right away
- Each operation or unit can substantially improve, **often dramatically**, its execution by inflicting the necessary behavioral changes to **the management** of the process
- Managing the effects of transformation change produces is the tough part of change management

Not every implemented change will necessarily produce an actual improvement

- Many times, changes need to be abandoned
- Newer execution styles need to be learnt
- Such clues are vital and need to be examined too

Establish the Context

Emphasis is on, 'management', because from what has been observed living most of my professional life in high maturity work cultures, a vast majority of problems are not process problems

- They are management problems

Two obvious lessons which were learned while implementing change management programs using SW-CMM (and CMMI) to achieve high process maturity with high performance capability are:

- Quality in a product is impossible without adequate quality in the process
- Even if you have all the right systems in place, it is not an assurance that you will be operating at high process maturity

Establish the Context

By integrating People CMM with CMMI, it was learned that—

- It is only when competent people use a capable process can you get predictable outcome
- With its competency orientation, People CMM is known to provide ‘depth’ to process improvement programs

Unfortunately, neither the CMMI nor People CMM provide real indications for how management ought to change in order to get the most out of the ever evolving transformations, process improvements produce

Quality in the process is impossible without the right people and the right management leadership that is committed to excellence

Establish the Context

Having the right systems in place is only a necessary, but not sufficient condition to operate at high levels of process maturity

Living a high maturity work culture is – experiential; one can feel the energy

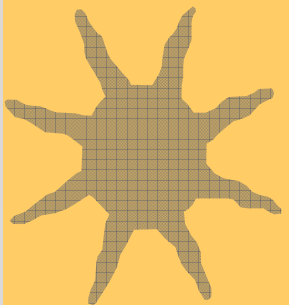
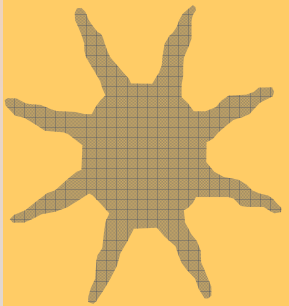
It is often the case in high maturity appraisals where both the appraisal team and appraisal participants leave the appraisal with mutual respect and satisfaction

Appraisals are normally ‘qualitative’ – judges the merits or goodness of the process to satisfy practitioner and sponsor needs



Characteristics of High Maturity Behavior: *The Necessary Conditions*

- What 'must' exist, for the sufficient conditions to make sense



Characteristics of High Maturity Behavior

The Necessary Conditions

1. All practices within scope must be verified for approach, deployment and institutionalization
 - Typically verified in SCAMPI Class C, B and A appraisals
 - Use of PIID to ensure adequate proof of execution
 - At least: “see twice-hear twice”
2. Process must be ‘quantitatively understood’ in order to enable prediction
 - Example: Predicting post-release defects based on a study of defect density and estimated size
3. Minimize causes of process variation and defects through effective process management

Characteristics of High Maturity Behavior: *The Sufficient Conditions*

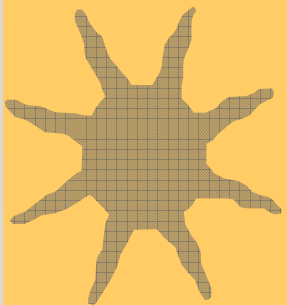
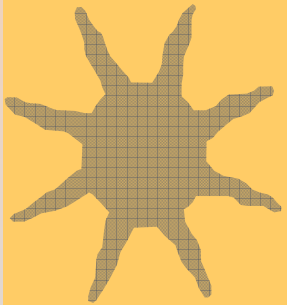
In the remaining time, let us simulate some of the behaviors of a typical level 5 work culture—

- Experience what it means to be in such a setting

Characteristics of High Maturity Behavior

The Sufficient Conditions

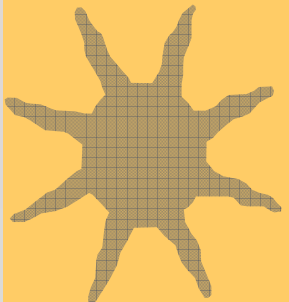
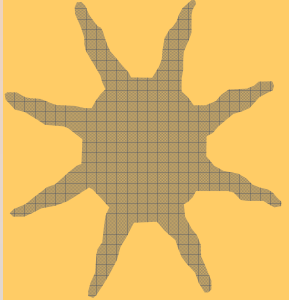
1. High maturity work cultures document what they do and document what they say
 - They document their plans and specifications on paper and track them to closure on paper
 - But then it most definitely is not a bureaucratic environment
2. Regardless of the kind of work assigned to an individual there is also another added dimension
 - Not only does every person think about their work, they also think about how they do their work
 - If some one thinks they have a better way of doing something, they are empowered to use the process improvement framework to make the change and evaluate the results
 - This is one of the pre-requisites for competency incubation



Characteristics of High Maturity Behavior

The Sufficient Conditions

3. Process only sets a framework within which individuals are required to function
 - But they have the freedom to do what they were trained to do, in a manner it is best done
4. High maturity processes integrate lessons learnt into their process
 - Every time a Best Practices Review session or a process appraisal is used to identify untried process improvement opportunities, changes are planned and incorporated into the process
 - Its effectiveness is measured within a short three-month period
 - If it works they get the word out, so that every project within the organization can gain from the experiences and results
 - If it does not work, they let everybody else know about it so that they gain from such experiences as well

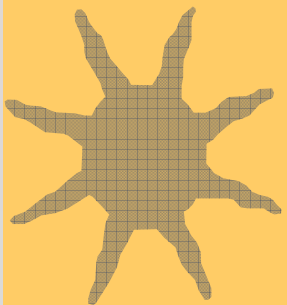
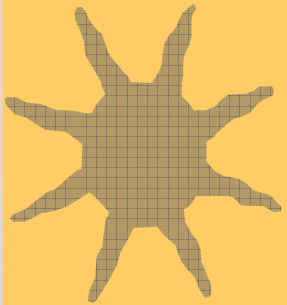


Characteristics of High Maturity Behavior

The Sufficient Conditions

5. A strong process improvement mindset and orientation in all activities at all times

- They may not have all the processes and systems that can be conceived, but they definitely would have the right thinking in place
- They allow and encourage problems to surface. And when they do, they permit solutions to be developed to fix them immediately so that it never again appears
- If the problem surfaces more than once, then they know that there is a problem with the process improvement process
- **People own the process:** organizational development and professional empowerment is promoted by making 'process definition' the cornerstone to ensure a 'continuous process improvement' culture

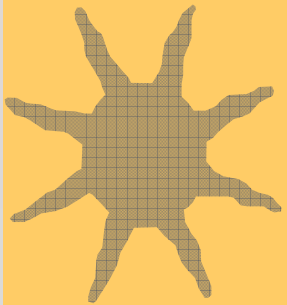
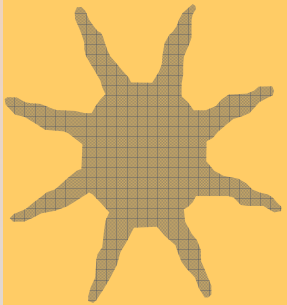


Characteristics of High Maturity Behavior

The Sufficient Conditions

6. Such a strong process improvement mindset is institutionalized

- By creating a Learning Organization
 - ▶ Borrow Shamelessly
 - ▶ Imitate Creatively
 - ▶ Adapt Imaginatively
- Tough questions are asked fearlessly to seek clarifications during post-mortems and introspections
- Quality improvement is a community approach
- They source process improvement opportunities from multiple frameworks and gain from synergy
- **Process defines behavior:** Momentum towards nurturing a learning organization is built further through 'Quality Management'
- **Behavior defines culture:** "Empowerment for all" in a truly participatory and cooperative work environment

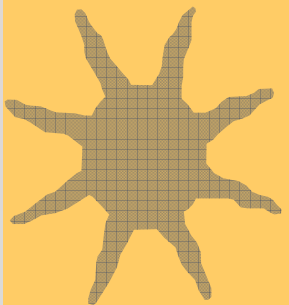
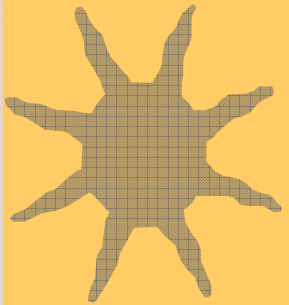


Characteristics of High Maturity Behavior

The Sufficient Conditions

7. Empowerment is visible at all levels, especially at the frontline to effect holistic improvements

- When an empowered individual does something different from expectations after the necessary inputs are provided, in a truly empowered work culture, the management is mature enough to understand that the individual did so for the right reason after exercising professional judgment
- However, for empowerment to work, progress review based on trust is necessary – **‘leadership by clarification’**
- Such trust is established as a result of organizational investments in ‘training’ and ‘competency development’
- The number of individuals with *primary* process improvement, audit and appraisal responsibility is limited to a very small number so that they can effect improvements that are both holistic and need based

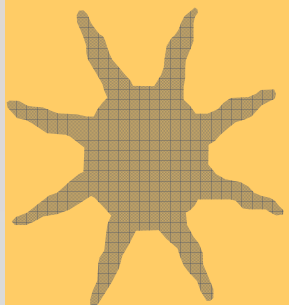
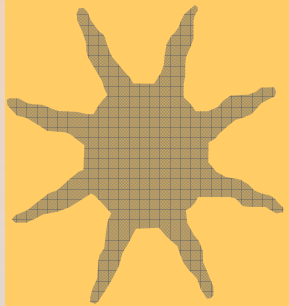


Characteristics of High Maturity Behavior

The Sufficient Conditions

8. Strongly humanistic to improve the way employees are treated, included and inspired in a software process improvement initiative

- Along with a strong emphasis on improving their software process, they have robust plans to improve the people process using the People-CMM, for instance
- People issues and people-based practices are also built into the improvement of the software process
- It is okay to admit a mistake or acknowledge ignorance – psychologically safe work environment that promotes a learning orientation
- With every process improvement opportunity comes, change management that requires management to understand the effects process improvements produce and how they should change the way they do business



Characteristics of High Maturity Behavior

The Sufficient Conditions

9. They use a multi-pronged approach to process improvement with 'organizational development' becoming key

- Process improvement is less of an exercise in model compliance and more of an organizational development activity
- Merits of the CMMI and People CMM frameworks are integrated into a single process program wherein process capability and workforce capability are built concurrently by an integrated process improvement team
- Implementing CMMI is akin to left brain thinking—logical, thinking in parts, objective, analytical, sequential and rational in nature; whereas, implementing People CMM is akin to right brain thinking—holistic thinking, random, subjective and intuitive in nature
- Process fitness is assessed using multiple certification and audit/appraisal techniques

Characteristics of High Maturity Behavior

Believe in tried & tested ways – More from Less

Leverage from commonality in CMMI & People CMM

CMMI V1.1	People CMM V2.0
Project Planning Project Monitoring and Control Risk Management Integrated Teaming Supplier Agreement Management	Staffing Workforce Planning Empowered Workgroups
Integrated Teaming Organizational Environment for Integration Decision Analysis and Resolution	Communication & Coordination Participatory Culture Mentoring Competency Integration
Organizational Training Organizational Process Focus	Training & Development Competency Analysis Competency Development Workgroup Development
Organizational Process Definition	Competency Based Assets
Organizational Innovation and Deployment	Continuous Capability Improvement Continuous Workforce Innovation Organizational Performance Alignment

Characteristics of High Maturity Behavior

Believe in tried & tested ways – More from Less

Leverage from commonality in CMMI & People CMM

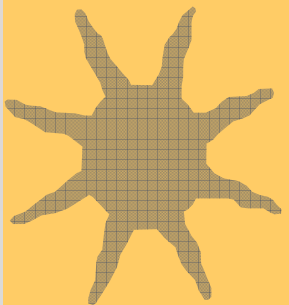
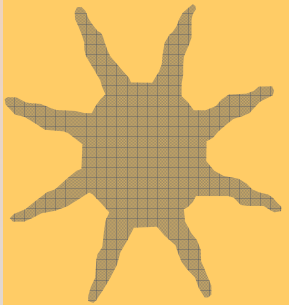
CMMI V1.1	People CMM V2.0
Requirements Management Requirements Development Product Integration Technical Solution Verification Validation	Competency Based Practices
Measurement and Analysis Quantitative Project Management	Quantitative Performance Management
Organizational Process Performance Configuration Management	Organizational Capability Management
Process and Product Quality Assurance Integrated Supplier Management Causal Analysis and Resolution	
	Performance Management Compensation Career Development
Ability to Perform - Institutionalization Practice	Work Environment

Characteristics of High Maturity Behavior

Business Justifications: Multi-pronged Approach

From postmortems & introspective sessions :
project stability is hurt due to ‘people’ issues

- High churn resulting from no active retention policies
- Inability to ensure individuals are ‘productively employed’ with a competency focus
- Lack of recognition of individual competencies leading to a decay of unit level competitiveness
- Lack of guidance to make informed decisions using experienced individuals in the organization – such as ‘Mentors’ or ‘Coaches’
- Employees care enough about ‘professional development’ – seek opportunities where available

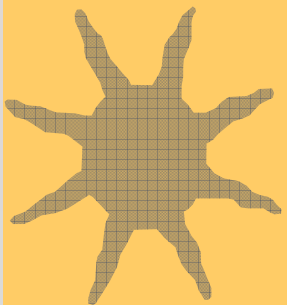
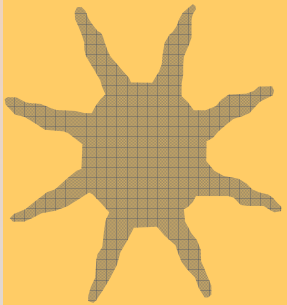


Characteristics of High Maturity Behavior

Business Justifications: Multi-pronged Approach

More People Issues:

- Breakdown of coordination among support functions such as HR & staffing functions and delivery functions resulting from 'just-in-time' staffing requirements of projects
- Lack of an appropriate compensation strategy to attract, retain and grow talent
- Employees like to work in 'caring' or 'less hostile' work environments
- The best of knowledge transfer and resulting documentation is no substitute to the 'eroded competency'
- Competency erosion has a cascading effect

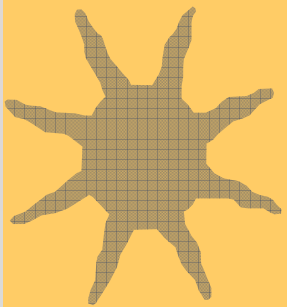
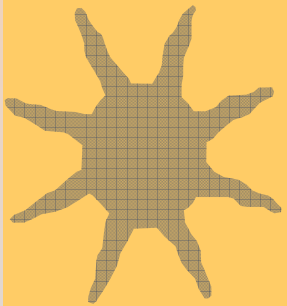


Characteristics of High Maturity Behavior

Business Justifications: Multi-pronged Approach

Lot to gain from commonality between CMMI and People CMM

- Structure of the two frameworks: goals promote both institutionalization and implementation
- (Generic) Goals help to improve process capability
- Intent behind the process areas grow, both, process maturity and workforce capability using complementary practices
- Similar competencies required for individuals to execute the designs behind these frameworks
- Predictability of execution: possible only when 'both' process capability and workforce capability (competencies) are stable

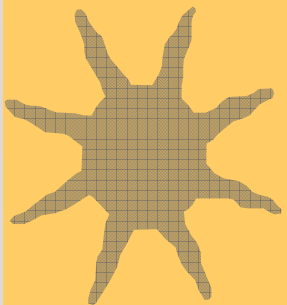
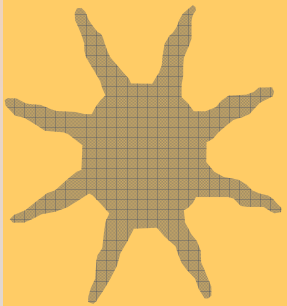


Characteristics of High Maturity Behavior

The Sufficient Conditions

10. Strong metrics program which offers quantitative feedback on process effectiveness

- A single process improvement program which combines the merits of effecting improvements to both the process and workforce leads to establishing metrics which offer a much clearer view of the benefits of the process program based on correlations—for example, effect of mentoring on reduction of cost of quality or cost of poor quality
- A single metrics program is used to offer quantitative understanding on both the aspects of – process capability and workforce capability
- Relentless questioning of – *how good and relevant are the old numbers or metrics in current context?* – leads to effecting improvements and revision of process capability baselines



Characteristics of High Maturity Behavior

The Sufficient Conditions

11. Continuous process improvement itself becomes an organizational competency—*something done in good times and in bad times*

- The long term view for process improvement is made up of multiple short term goals, that is based on reflection and learning
- Attaining a maturity level is not the prime motivation during a process assessment; it is only incidental –
 - ▶ What must we change, if we have to keep strengths as stronger strengths and weaknesses are converted into strengths
 - ▶ In order to change the process, utmost importance is placed on changing relationship styles, attitudes, and self-esteem of the people
- Individuals feel more secure when the strategic intent of the business is known in terms of its impact on individuals' career development

Characteristics of High Maturity Behavior

The Sufficient Conditions

12. Every individual in the delivery system is a quality champion and the CEO is in-charge of process improvement

- Collectively, we can be more insightful and intelligent than we could possibly be, individually
- The task is no longer separate from the self—the individual identifies himself with the task
 - ▶ It would be a serious mistake to schedule a peer-review when the author is not convinced about the quality!
- Gains in process capability and workforce competency are not just for this season
 - ▶ Have to be sustained and self-reinforcing

13. Everyone plays well, with clearly defined rules and consequences for not coming through, or pay-offs for a job well done



Conclusion

Clues beyond a SCAMPI Class A

People have high self-worth and self-esteem, mutual respect for one another and are highly geared to accept responsibilities

Not only does everybody think about what they do, but they think about how they do their work and make the day-to-day changes that are necessary for optimal performance

A high maturity organization is oriented to continuous exploration of best practices—they force a change when things get too comfortable

Ideas that have business value are often actively sought by the organization and rewarded suitably

Conclusion

Clues beyond a SCAMPI Class A

High maturity organizations look at problems or challenges as opportunities and profit from them by building adequate solutions while exploring solutions from a suite of options

They have strong, empowered chains of leadership who communicate their dreams to high energy teams who work with a sense of urgency to get things accomplished

It is okay to fail is their motto. Failure is often encouraged and not discouraged. Both successes and failures are discussed openly so that everyone in the organization can capitalize from both experiences

Conclusion

Clues beyond a SCAMPI Class A

A strong foundation of **process evaluation** forms the basis **for effective process improvement**

- Appraisals evaluate not just the process capability (*impacting organizational maturity*), but also workforce capability (*impacting organizational competencies*)
- Multiple types and opportunities for process appraisals in an year
- Purpose of an appraisal is to establish the *intelligence* behind the system of practices or the process in vogue
- Relentlessly question status-quo with “just how good are we in our execution?”

It is my belief that only an empowered work force can make the day to day changes that are required to keep a level 5 at level 5 for more than 5 minutes!

Thank You!

DISCUSSIONS, Q&A

Raghav S. Nandyal
Chief Executive Officer

SITARA Technologies Pvt. Ltd.

#54, Sri Hari Krupa

6th Main Road

Malleswaram

Bangalore KA 560 003

Telephone: +(91-80) 2334-3222

Mobile: + 984-523-3222

Email: raghav_nandyal@SITARATECH.com

URL: <http://www.SITARATECH.com>