Q&A From "Leveraging CMMI® V2.0 and DevOps to Maximize Agile Transformation" Webinar

Resources:

- **Webinar Recording**
- **Webinar Slides**
- **CMMI V2.0**
  - Adoption & Transition Guide
  - CMMI V2.0 Model Viewer
- **A Guide to Scrum & CMMI: Improving Agile Performance**

Question: How can DevOps help organizations to improve productivity and increase revenue?

Answer: Join this LinkedIn Group to take part in this conversation: https://www.linkedin.com/groups/1516987/

Question: Can DevOps be used in manufacturing two-wheelers?

Answer: DevOps can be used in all environments, including manufacturing. The concepts, culture and tooling are most useful when applied within a holistic life-cycle framework like the CMMI V2.0

Question: Will DevOps be integrated into CMMI as planned? Will DevOps encompass implementation of both CMMI V2.0 DEV & SVC simultaneously?

Answer: Yes, we are planning DevSecOps content to be included in the V2.0 Product Suite, and yes, it will most likely be represented as a potential new model view between DEV and SVC. DevOps implies a synergy between DEV and SVC.

Question: Can you provide the CMMI process areas supported by DevOps?

Answer: DevOps/DevSecOps is supported by all the Practice Areas in the CMMI, particularly those in the core PAs and those in DEV and SVC views.

Question: Is CMMI V2.0 address all requirements of ISO 27001:2013? Will Security assessments be done in this model vis-à-vis ISO 27001?

Answer: CMMI V2.0 Security (and Safety) Content has references to various standards, including 27001:2013, but that content is not intended to "implement" ISO 27001, but rather, include key places where the standard comes into play. We are not intending to use CMMI V2.0 appraisals to do ISO 27001 audits, but those types of assessment requirements can be factored into the scope of a CMMI appraisal.

Question: In DevOps all tasks are automated and the data is available for complete tasks/story level, so how do you bring in improvements at the subprocess level? And how do you address practices for Configuration Management?

Answer: Carefully! Seriously, automation and continual releases require an even tighter and more disciplined approach to Configuration Management – in fact, without strong CM processes, such automation would simply be pushing out potentially incorrect data faster.

In DevOps, not all tasks are automated—we wish it were so! For example, analyzing and addressing a customer's trouble ticket may initially be automated but defaults to a human-staffed help desk for harder issues. In any case, whether automated or not, improvement at all levels in DevOps is driven by measurement (bring us data). If your automation support reveals that the new features associated with a particular code segment have a higher incidence of defects over multiple releases that are discovered after deployment, rather than during testing, this information should indicate subprocesses that you might want to examine. The same type of analysis can be done for CM. For example, if the commit/pull patterns associated with a particular subset of developers differs from the rest of the team, this might indicate an area for investigation with respect to CM practice implementation, or training, or integration, etc. (From a DevOps viewpoint, the data could indicate problems or new ideas to drive improvements. You have to investigate!)

Question: Please provide the traceability of DevOps to CMMI practice areas.

Answer: We are not complete with the DevOps/DevSecOps content, so unable to provide those at this time. Filtering will be included for DevOps/DevSecOps views when the content is released.

Question: When will the CMMI V2.0 Security and Safety Views be available? What different elements will be covered?

Answer: Early 2020 (Q2) is the current target, to be confirmed. A brand-new Capability Area called Managing Security and Safety will include 3 new Practice Areas (two for Security and one for Safety) with a great deal of other very robust content that will be part of the core PAs.

Question: Would you clarify please a Security and Safety comment? Is that going to be part of the CMMI V2.0 Development model, or will it be separate (similar to the Services model)?

Answer: It will most likely include new views of each/both. Stay tuned for more!

Question: The Security aspects are currently "greyed" out in CMMI V2.0, will they get addressed with DevSecOps?

Answer: The new Security and Safety PAs will be part of the next release in Q1/2 2020

Question: As I understand it, CMMI V2.0 currently does not have a security Process Area, so is it being extended?

Answer: See above answer. One new Capability Area with 2 Security PAs and a lot of new, great content in Core PAs.

Question: Where can we download that Agile Playbook for CMMI? (definitely interested in the revamped version)

Answer: Here is a direct link to the resource on the CMMI Institute website: A Guide to Scrum & CMMI: Improving Agile Performance

Question: Can DevOps practices apply to embedded systems development for highly risk-adverse industries like medicine or space?

Answer: It already is. We are working closely with both the FDA and NASA for future content, including Software Assurance for safety- and mission-critical systems, and medical device manufacturing.

Question: (In response to poll question) "What are the biggest risks you see in adopting a DevSecOps-CMMI-based approach?" - How about none of the above? We see the biggest challenge as gaining adoption / buy-in across leadership and the organization.

Answer: Agreed. We have an additional PA we want to release on Organizational Behavior that will directly address these challenges. Cultural change management is always the hardest part. Software code is easy to change compared to human beings.

Question: There is need for organizations to begin defining business objectives that span across both product development and operational support areas. Can you define how they are dependent on each other?

Answer: Too long to answer in a short FAQ, but as Bob Moore pointed out, there is a big need to break down the silos and barriers that have existed in the past.

Question: Can you please provide examples on measures to be captured?

Answer: See the Managing Performance Measurement (MPM) Practice Area in the CMMI V2.0 model. As suggested in the presentation, are you collecting data on how long it takes you to patch the system? How about how often user stories are updated versus how often code is changed?

Question: Are you involved with the Cybersecurity Maturity Model Certification (CMMC)?

Answer: Yes we are, on a number of fronts. The new CMMI V2.0 Security content and approach, along with the CMMI Cybermaturity Platform are currently being discussed and reviewed with the DoD.

Question: Can I consider this as a new trend from CMMI Institute, coming up with a joint DEV and SVC constellation guided by the 4 Agile Manifesto and 12 Principles?

Answer: In a word, yes. The open architecture of CMMI V2.0 was specifically designed to be able to be "tailored" to fit and work with other methods, standards, models and approaches.

Question: Reducing paperwork or documentation is considered "overhead" but they're required as evidence for appraisals. How is this overhead going to be minimized without impacting the appraisal?

Answer: This is a learning curve for our Appraisal community. Most DevOps tools come with APIs to be able to capture key information and most development platforms cited by DevOps already contain quite a bit of "self-documenting" features to simply manage the data and related outputs. This is actually pretty wonderful from a CMMI viewpoint, because documentation pulled from an API presents a data-driven, high-fidelity representation of the processes being used.

Question: How can we get the information and pricing for DevOps training and certification?

Answer: Not yet available for CMMI-based training, but this will be included when we do release. The DevOps Institute provides this training through its partners, of which one of our presenters (Bob Moore) is one. See https://www.biztransform.net/certifications/devops-certification/devops-foundation/.

Question: As more and more firms are adopting DevOps-CMMI, do we foresee Agile phasing off?

Answer: We see that agile as a similar "movement" is already a "silver bullet showing tarnish", mostly because many so-called adopters are not really doing Agile. That being said, some of the principles of agile were embedded in CMMI from its very early days. Methods and movements may come and go, but the CMMI V2.0 product suite provides a holistic framework to accommodate both existing and new approaches.

Question: What is a correct sequence to adopt: DevSecOps first and then CMMI V2.0 or otherwise?

Answer: DevSecOps will only address a part of the business challenges from development and delivery of secure products, systems and services. The CMMI provides a broader, more comprehensive approach that DevSecOps can easily integrate and work with.

Question: Will 21 CFR PART 11 regulations compliance be covered as part of Security compliance?

Answer: CMMI V2.0 is not a compliance-based model. That being said, there are some practice areas and practices where this regulation can be more readily addressed.

Question: Is DevOps used in other development methodologies?

Answer: From our research and experience, tenants, tools and techniques from DevOps are being used in a variety of development methodologies. The challenge is making sure the method fits the product or service, environment and customer needs. Most DevOps practitioners would say that development is contained within DevOps, not the other way. DevOps includes testing, integration, and support as well.

Question: Does DevOps address the process flow within the Ops block? It seems like it focuses on improving Dev, but not so much on Ops - CMMI may help there

Answer: During the webinar, we focused mainly on the DEV side, but the OPs side is equally, or even arguably, MORE important. CMMI V2.0, including the Dev, Services, and Supplier Management views, addresses the entire spectrum.

Question: Is DevOps also applicable for developments which are done from scratch or this is just for enhancement-types of development?

Answer: Both new development and enhancements.

Question: Are there tools available to assist in preparation of appraisals?

Answer: Yes! Please visit https://cmmiinstitute.com/learning/appraisals to learn more about appraisals and you can email info@cmmiinstitute.com with specific questions. For a data-centric, DevOps insight, see https://www.biztransform.net/process-data-mining/process-mining-and-nymbul-mineral/

Question: How do we bring that cultural change to an organization?

Answer: See the CMMI V2.0 Adoption and Transition Guide and stay tuned for more information on the Organizational Behavior PA.

Question: Are you all looking at SAFe Agile and how best to integrate DevSecOps and CMMI with SAFe?

Answer: Yes, we already have a partner who has created a mapping to SAFe which we are planning on incorporating in a future release.

Question: When is the next CMMI release due out?

Answer: Appraisal methods updates and new systems on 9/30/19 and new content Q1/2 in 2020.

Question: How is DevOps different from Agile/SDLC?

Answer: DevOps, as per Bob's slides during the webinar, is more of a movement and cultural approach, that focuses on "moving operations from the right to the left" of the development cycle (operations and customer requirements addressed with frequent feedback loops throughout development and deployment). Agile and SDLC can be arguably considered as development "methodologies", although agile does include a critical emphasis on agile values and culture as well. Different methods are useful for different types of product and development environment, which is why the CMMI talks to identifying and keeping the lifecycle methodologies updated.

Agile/SDLC is doing well when a team can adapt to customers' changing business needs, keep delivery promises, and not burden developers with "non-value-added" (from the customers' viewpoint, not the developers'!) process. DevOps incorporates Agile thinking and takes a broader view. In the DevOps perspective, delivering value to a customer in synchronization with the entire business organization is the primary motivator. This means that the people who install, support, maintain, and secure the system are also part of the delivery chain. Providing value to the customer requires all of the organization's components to be able to move together and improvement to how development is done could come from the team that installs system patches, not just developers. This holistic viewpoint is reflected in CMMI's systems-level mindset.

Question: What is the best way to improve processes when moving from CMM-DEV 1.3 Level 3 to CMMI V2.0?

Answer: Focusing on the performance and performance improvement components of the model, including the value statements in the PAs and practices, and the required Performance Report will serve you well when moving from CMMI V1.3 to V2.0. I would also take a close look at the Sustaining Habit and Persistence (SHP) Capability Area practice areas of Implementation Infrastructure and Governance, which are unique to CMMI V2.0.

Question: How does DevSecOps/CMMI V2.0 fit into the new-age projects involving AI/ML and RPA?

Answer: AI, ML and RPA are all aspects of automation that fit very well with the automation side of DevSecOps. CMMI V2.0 has several references to all three in the current version, and we are planning to add more in future versions.

This is an interesting question! Although the technology isn't quite caught up to the advertising on AI, ML, and RPA, the capability to create a self-correcting DevOps toolchain that seeks to optimize project processes is something that we'll see in the not too distant future. The challenge will be that creative software development in addressing customer needs will continue to be a human endeavor for some time to come. How does a human team adapt when their toolchain tells them to behave in a certain non-intuitive way in order to reduce defects, more predictably deliver to customer expectations, and decrease cycle times? DevOps, CMMI V2.0, and whatever else comes along will evolve, as they always have, to accommodate the mixture of human/machine process optimization.

Question: Are you planning to add DEVSECOPS-based elaborations/pointers in the CMMI V2.0 Model?

Answer: Yes, and we are working on a DevSecOps "playbook".

Additional questions? Please email info@cmmiinstitute.com