# Q&A From "Using CMMI With Agile & Scrum" Webinar

**Resources:**

- **"Using CMMI With Agile & Scrum" Webinar Recording**
- **"Using CMMI With Agile & Scrum" Webinar Slides**
- **CMMI V2.0**
  - Adoption & Transition Guide
  - Method Definition Document (MDD)
  - Development View
  - Services View
  - Supplier Management View
  - CMMI V2.0 Model Viewer
- **CMMI and Agile**
- **A Guide to Scrum & CMMI: Improving Agile Performance**
- **CMMI Training Courses**
- **CMMI Certifications**
- **CMMI Appraisals**
- **CMMI Capability & Maturity Levels**
- **CMMI Cybermaturity Platform**
- **Great Big Agile by Jeff Dalton**

**Question:** Can you share the link to the discussion of the CMMI leaders you mentioned?
**Answer:** https://www.linkedin.com/groups/1516987/

**Question:** There is a large amount of literature on the preconditions that organizations must establish to make empowered, self-managed teams successful. I have rarely heard this knowledge mentioned in Agile literature or at Agile conferences. Why is the Agile community having to reinvent this knowledge through expensive trial and error experiences?

**Answer:** It is largely absent in Agile literature, or in the brain trust. That's why Jeff Dalton wrote the book! :)

**Question:** I am a Process Definition Consultant and need clarification please. In this webinar, are we referring to CMMI V2.0 or V1.3? Can you share a quick heads-up on the difference between V1.3 and V2.0 for better understanding?

**Answer:** This webinar is focused on CMMI V2.0. The CMMI V2.0 model is a re-architected version that focuses primarily on performance and outcomes. Every best practice includes a clear business value intent and purpose, with additional requirements for outcomes, and examples for each. Explore the Transition Guide when moving to this latest version of CMMI.

**Question:** Please explain the acronyms you reference in this webinar?

**Answer:** CMMI (Capability Maturity Model Integration); II (Implementation Infrastructure); GOV (Governance).

**Question:** Does being Agile mean you have to be a CMMI appraised organization and vice versa (that if you are CMMI appraised, you are Agile)?

**Answer:** No, it means neither.

**Question:** What is a Gov document link?

**Answer:** See Governance Practice Area in the CMMI V2.0 Model Viewer.

**Question:** Can you address government contracts that require an Agile methodology while demanding scheduled feature deliveries?

**Answer:** This can only be addressed by saying that they don't seem to know what they are asking for, they seem to think that Agile = Scrum.

**Question:** Can Jeff please provide some examples of reverse metrics that he referenced?

**Answer:** "Reverse Metrics" refer to measuring leadership's role as a steward and provisioner of a high-trust Agile infrastructure. It's a system of measurement where Agile teams gauge management's performance in a visual and transparent way. Reverse Metrics call for publicly displaying leadership's personal engagement, execution of Gemba Walks, enterprise retrospectives, adherence to Agile values, provisioning of co-located space, automated tools, and more. Remember - Agile leaders are not asking people directly, and CPI (Cost Performance

Indicator) and SPI (Schedule Performance Indicator) are irrelevant with fixed team size and fixed sprint durations.

**Question:** Do you suggest that even a project with 1 or 2 resources can and should also follow Agile and Kanban practices?

**Answer:** Agile emphasizes self-organized teams, so yes, Agile and Kanban can successfully be used on smaller teams. Even for a team of 1-2 people, it's valuable to create a lifecycle/defined approach on how to plan, prioritize, and track work. This provides powerful visibility to stakeholders outside of the project and validates prioritization and knowledge management (crucial if team membership changes). There's even been some great writing online about using Kanban and other Agile practices for tracking tasks with your family (which sounds a little crazy, but can be super-effective). Jeff recommend "Personal Agile" and uses it daily in his work. A single-person Agile team can easily use simple tools (i.e. Trello) to manage a backlog, visually display progress, and prioritize stories.

**Question:** What do you see as better: Agile or Waterfall? Should we abandon Waterfall and transform our organization to Agile?

**Answer:** Each life cycle has their own strengths and weaknesses – CMMI concepts don't recommend one vs. another, as that is too prescriptive. The product development scope, organizational needs, and projects should determine what you proceed with.

**Question:** For CMMI High Maturity organizations, how can we apply the Scrum framework?

**Answer:** Essentially, you should use the same approach as any other process/subprocess – tie the Scrum framework to business objectives and quality/process performance goals, and then contributing sub-processes and metrics should be analyzed for variation, etc.

**Question:** Does CMMI V2.0 include integration with SAFe, S@S? Does DevOps find any place in the model?

**Answer:** We are planning future content in the model for DevOps and DevSecOps.

**Question:** You hinted at a CMMI tool available that helps "reverse engineer" existing projects into Agile fashion. Can you elaborate and advise where this guidance can be found?

**Answer:** There is not a specific tool, what was referenced is when you "reverse engineer" what it takes to be high-trust, the approach becomes obvious. A tool won't be useful in this case.

**Question:** Can you address the subject of the DoD requirement for Earned Value Management (EVM) and Agile? Can these two techniques work together?

**Answer:** EVM and Scrum work fine together, albeit the combination is not very useful.

**Question:** How can we make organizational teams aware of the importance of Agile and CMMI?

**Answer:** Awareness can be challenging, and "lecture mode" is not enough...you should focus on the value it will provide, senior leadership buy-in, and incremental organizational change. GOV and Implementing Infrastructure (II) are critical here as well.

**Question:** Do you have a mapping of sorts that links Agile values to elements of CMMI V2.0?

**Answer:** Yes, it's in the model itself – you will find it by process area and practice where applicable. Agile with Scrum practices can also be isolated in the model by searching for that context-specific information. Additionally, Jeff Dalton offers a mapping of CMMI V2.0 to the Agile Performance Model here.

**Question:** Is it correct that in order to scale Agile organizations, you must focus on processes other than "Project Management"?

**Answer:** You're scaling Self-Organization, not Agile, which goes well beyond Project Management.

**Question:** How would a networking company adopt Agile and sync it with the CMMI Development View under the V2.0 model?

**Answer:** If Agile is just a set of values and behaviors, and CMMI is simply a list of what great companies do to create quality products and services, then it makes sense that any company can adopt both. People ask, "what is the fastest way to get to CMMI Maturity Level 3 and Agile?" The truthful answer is "just be a really great place to work!" Think about what that takes, and the answer will be clear.

**Question:** Should we change the roles of our development team from Business Analyst (BA)/ System Analyst (SA), Dev, Tester to Scrum role for deploying Agile culture in the organization?

**Answer:** That's up to you. Scrum is not the definition of Agile.


**Question:** What are some other recommendations for good books / articles on this subject?

**Answer:** Return on Process (ROP), Great Big Agile, Elements of Scrum


**Question:** Do these new tools outline examples of how to comply with CMMI requirements as a "natural" output of our daily work in tools like Confluence, JIRA, etc.? Our challenge has been avoiding additional layers/burden of work on delivery teams to support audits.

**Answer:** Yes, the model includes examples like this and more are planned to be added. Bottom line up front in CMMI V2.0, it is stated that if you are doing "process for process's sake" and not integrating them with your organizational tool suite, etc., then it's likely being done incorrectly. The CMMI V2.0 model provides guidance on this.


**Question:** The main challenge in an Agile environment is to capture the evidence of CMMI process areas. Any recommended tools/techniques/best practices to execute Agile projects and still be able to assess the health of CMMI process coverage?

**Answer:** If you perform the ceremonies with integrity and your Lead Appraiser is familiar with your organization and Agile, you should have no problem in succeeding in this.


**Question:** Since story points vary across teams, there is no way to ascertain one team's progress with respect to another or compare them in an "apples to apples" manner. Also, amongst "Agile-ists" there is a consensus that comparing velocity across teams is an anti-pattern. Given this, how is the measurement repository and Maturity Level 4 requirements of the model met?

**Answer:** No conflicts here – please reference Jeff's book. Managing Performance and Measurement (MPM), High Maturity and similar items become enablers of Agile at an organizational level. While you should not compare velocity between teams, there are OTHER metrics. It's not all just cost and scheduling data.


**Question:** Is there a link for CMMI V2.0 training?

**Answer:** Yes!

- [CMMI V2.0 Upgrade Training](#)
- [All CMMI Training Courses](#)
- [All CMMI Certifications](#)

**Question:** Can you share Halfaker's 38 Enterprise Engineering Management Framework (EEMF) questions? Are you suggesting that these "monthly engineering maturity reviews" might be a method of satisfying Process Quality Assurance (PQA) practices?

**Answer:** Here are some of examples of the questions by domain:

- **Project Information**: Source Code Repository? Sprint Length? User Story Tool?
- **Discover**: Journey Maps published? User Research Plan published?
- **Design**: # Sprints of Groomed User Story Backlog maintained? Style Guide published?
- **Develop**: Mature CCB/CAB? Source Code peer reviewed consistently? Static code analysis automation? Continuous quality gates enforced in dev pipelines?
- **Test**: % Functional Regression Test Cases Automated? % Test Coverage across all Functional and Non-Functional Requirements? UAT Prep Checklist?
- **Build and Deploy**: Deployment Plan/Checklist published? Source code build automation?
- **Sustain**: Application performance monitoring approach? Disaster Recovery Plan published? Incident Management/Response procedure(s) published?

**Question:** Within the context of CMMI V2.0, where can I find more focus on "Self-Organization"?

**Answer:** Processes should reflect how the work is actually done, and tools should "fit" with and be driven by processes. Making tools/systems a natural part of a process is the best practice, but CMMI will always be tool/systems agnostic. For more information on self-organization and leadership architecture for large-scale Agile, reference Jeff's book, "[Great Big Agile: an OS for Agile Leaders](#)." It presents a [CMMI Maturity Level](#) 3-aligned model for leaders.

**Question:** From your experience, what is the timeline before the benefits of an Agile approach is realized by our customers?

**Answer:** When done correctly, numerous and almost immediate benefits occur, including increased productivity and morale, better accountability, and less variation in delivery.

**Question:** What are the historical challenges that organizations face with Agile methods?

**Answer:** The main challenges include scaling to an organizational level, integrating across Agile projects, and addressing other performance and process approaches in a holistic way.

**Question:** How do I access the CMMI V2.0 model since I can't just buy a copy of the book?

**Answer:** CMMI V2.0 Model License Options:

- Annual License - unlimited access to model viewer and all content updates
- 90-Day PDF Download
- 30-day Trial License

**Question:** Can we get Ron's email address? I'd like to use this webinar content as outside collaboration of CEU (Continuing Education Units) and PDU (Professional Development Units) for Scrum Alliance / PMI.

**Answer:** Email info@cmmiinstitute.com for these requests. They will be passed on to the appropriate Subject Matter Expert.

**Question:** Is Cybersecurity content included in CMMI V2.0?

**Answer:** CMMI V2.0 Security and Safety content is drafted to release in 2020, as well as how the CMMI Cybermaturity Platform will work with CMMI V2.0 and vice versa.

**Question:** How do you plan to take on the likes of SAFe, Scrum@Scale?

**Answer:** We plan to have marketing communications on these topics with updates to the Agile playbook and content.

**Question:** What's your take on wall of reference around estimations?

**Answer:** Estimating needs to occur for Agile and can be done in several non-intrusive ways (e.g., planning poker, t-shirt sizing) and then improved over time.

**Question:** It seems to me that it is much easier to read the Governance practice through a "Command and Control (C&C)" lens than through an empowerment lens. The practices include senior management defining organizational directives and holding people accountable to them, and ensuring decisions are driven by statistical and quantitative analysis (as opposed to the way an empowered team might decide themselves to make such decisions). I see how it CAN be interpreted through the lens of empowerment, but it really would require coaching to get senior management to interpret these practices in this way.

**Answer:** Governance is intended to be both a top-down and bottom-up Process Area. The empower angle comes into play for Agile values and to verify from the practitioner's perspective that senior management is playing an active role in Agile adoption, culture, and performance improvement. Both [Jeff Dalton's recent book](#) and ["Reinventing Organizations"](#) are great reads about self-organization principles, practices, and case studies. Lengthy debates have ensued about GOV in an Agile self-organizing environment. While it's easy to see GOV as C&C, if you apply CMMI to a truly Agile organization then the leaders must have responsibility for setting the tone and culture. Agile leaders must demonstrate adherence to Agile values and techniques themselves and provision their teams with what they need to "be Agile," which required infrastructure. Agile without high-trust isn't Agile, and that's a culture issue that leadership needs to address. An appraisal sponsor who proclaims their organization "Agile" but doesn't themselves behave in an Agile manner is putting their appraisal at risk due to GOV.

**Question:** Could you give some examples of metrics that are meaningful to compare projects or draw up organization Process Change Boards (PCBs)?

**Answer:** There are multiple examples of such metrics in the [CMMI V2.0 model](#).

**Question:** There are instances where all projects have adopted Agile. In such scenarios, implementing CMMI poses many challenges. Can you shed some light on this?

**Answer:** CMMI augments Agile in a way that it strengthens what Agile intends and enables a more effective means to ensure its promises are met and performance improvement can be achieved (see "[A Guide to CMMI and Scrum](#)"). Challenges are typically due to two things: over-complicating process implementation and Lead Appraisers who demand "waterfall" and command and control evidence during appraisals. It's critical that project team members don't view CMMI alignment initiatives as "CMMI-based" – instead, they should focus on management/engineering maturity improvement efforts and on lean/efficient ways to align with these best practices. Rather than using the CMMI words (e.g. Validation and Verification), the focus should be on a person/team translating the organizational uses into words and then creating a path to self-improvement.

**Question:** I am a researcher at University of New South Wales at Australian Defense Force Academy. Earlier in my career, I led internal process improvements around CMMI V1.1 and V1.3. My research is focusing on organizational practices in comparison with standards, models, and frameworks. I do not see CMMI Institute presence in Australia. Are they planning to approach the market here in Australia? and if yes, what is the best way for me to get involved?

**Answer:** Our [Partners](#) offer training courses in locations around the world – find a Partner near you via the [Partner Directory](#). You can also check the "When Is The Next Course" section of each [training course](#) webpage to see if any are scheduled in your geographic location.

**Question:** Interesting thoughts on using traditional metrics. What do you think of force-fitting existing metrics like defect density and the like?

**Answer:** We're not fans of "force fitting" anything regarding metrics - they should be an intrinsic part of the process. If someone collecting/analyzing metrics cannot easily answer why the measure is being collected, then it should be questioned if it's useful or needed at all. Rule of thumb - few base measures (see model definition of Base Measure vs. Derived Measure) and LOTS of analysis, not vice versa.


**Question:** Currently there is a great deal of mobility at my organization. Agile relies heavily on trust, but if the teams change often, how do we re-build that trust with new team members?

**Answer:** Having solid processes in place for new team members to follow will ensure they come up to speed quickly and have clarity on their process role. This fosters buy-in and keeps the entire team on the same page.


**Question:** Could you give us an example of how CMMI can become Agile with Scrum?

**Answer:** Multiple examples are in the CMMI V2.0 model itself in the "Agile with Scrum" context-specific information.


**Question:** I notice sometimes that Government/Department of Defense projects follow an extensive acquisition plan to create software products. For project teams that already have a product and focus more on post-production tasks, is it possible to successfully implement Agile (Scrum, Lean, etc.) with these types of teams? Is it possible to have a team follow both Agile and waterfall to meet project objectives?

**Answer:** Yes and Yes. We have numerous organizations who have waterfall, iterative, rapid prototyping, and Agile projects going on simultaneously - it's really about what makes sense to that project, the organization, and their customers. Tailoring at CMMI Maturity Level 3 also help to address this.


**Question:** For us in the government sector, can you send us a certificate or one-page summary of the webinar for our training records?

**Answer:** Please reference the webinar recording and slides for training documentation. If you require a more specific document such as a certificate, please email info@cmmiinstitute.com.


**Question:** Are Agile practices well suited for CMMI certifications? Or is it two-way?

**Answer:** Yes, but it depends. See responses to questions above on how Agile and CMMI work together.

**Question:** Within a CMMI V2.0 context, how are processes institutionalized across projects if they are Agile-based, dissimilar in nature, and based on very different teams?

**Answer:** The word "institutionalized" and "institutionalization" no longer apply or exist in CMMI V2.0. The "Sustaining Habit and Persistence" Capability Area and supporting Practice Areas address these questions in the model.

**Question:** How do we get started with DEVOPS, what is a good roadmap?

**Answer:** DevOps includes Agile principles and values, so that is a good stepping stone, along with automation to lean out the process. Remember that Agile is about culture, not process, so that should be addressed first and foremost. Once you've established a high-trust, self-organizing infrastructure, then it's time to think about tool-chains that can help with automation. Process automation should happen when possible and "moving operations to the left" is key in the development process so that operational requirements are included. I would recommend starting with reading (or listening to the audiobook) "The Phoenix Project", which is a great, accessible intro to DevOps. It's important not to start with the technology, but really understand the concepts first. You should then look at the book "DevOps Handbook" and learn about the relevant technologies (see blog post here).

**Question:** I would like to hear more about Scrum, CMMI, and Maturity Level 4 metrics/models.

**Answer:** Thank you for the suggestion, we will consider these topics for future webinars! In the meantime, here are some reference links for you:

- What is CMMI?
- CMMI & Agile
- CMMI Maturity Levels

**Question:** Is there a quick reference comparison matrix available to share on CMMI V1.3 Development and Service to CMMI V2.0 and ISO Standards? What artifacts are common to each and what replacement (new type) of artifacts will be needed by practice?

**Answer:** There is a CMMI V1.3 to V2.0 mapping spreadsheet available on the model dashboard/resource page. It does NOT contain example work products, as those are included in the model itself. The examples are not requirements, just a list of common work products. ISO 9000 and 20000 and COBIT have been mapped to V1.3 - updates to V2.0 are still pending.

**Question:** Any plans to offer a CMMI Assessment in Agile mode?

**Answer:** See "Evaluation Appraisals" as described in the CMMI V2.0 Method Definition Document (MDD) - they can be run "agile-y" and many Lead Appraisers use Kanban boards to

manage and monitor the appraisal activities.

**Question:** My organization is moving as quickly as possible to implement Agile. This has been mandated by the DoD—which we are part of. Overall, there seems to be a widespread impression (that has been promoted by the "Kessel Run" and "DIUX" experiments in DoD) that process, rigor, and guardrails for programs and teams are outdated ideas and that a whole new paradigm must replace it. The book "Accelerate" has become a scripture for several people in our organization (they quote it frequently). This book promotes several ideas about using Agile and DevOps that attack the principles of CMMI (although there is some misinformation that they promote), and the use of process models in general. Below are some of the conclusions that they make based on survey data from practitioners. Can you address them?

**Answer:** Many of these misperceptions directly influenced the CMMI V2.0 updates and release. Most, if not all, of these statements are based in both fact and misperception. In the case of CMMI, they mostly revolve around how the model was adopted and deployed. Like any model, standard, or method, HOW you adopt and deploy it is critical to your success and continual performance improvement. Responses are as follows:

- **Misconception:** Maturity models focus on an organization arriving at a mature state and then declaring themselves "done".

    o **Response:** The definition of "done" and the final state of maturity is entirely up to each organization adopting CMMI. However, continuous performance improvement, including innovation, is fundamentally a never-ending journey.

- **Misconception:** Maturity models don't have the flexibility to address organizational differences.

    o **Response:** This is a common misunderstanding with CMMI – the model is indeed flexible and focuses on <u>what</u> should be done to improve, not <u>how</u> to do it.

- **Misconception:** Maturity models are practice-focused instead of outcome (results)-focused.

    o **Response:** The CMMI V2.0 model was re-architected to focus primarily on performance and outcomes. Every best practice includes a clear business value intent and purpose, requirements for outcomes, and examples of each.

- **Misconception:** Maturity models define a static level of technological and organizational abilities but can't keep up with the pace of change in the landscape of the industry.

- **Response:** The CMMI model has built-in requirements for how to continually measure and advance performance, technology adoption, and innovation. That being said, a number of organizations have allowed themselves to focus on process for "process's sake", which has never been a good reason or approach for adopting CMMI.

- **Misconception:** Self-organizing teams are antithetical to the idea of standard processes. Teams should be able to change their processes without having to obtain permission from the organization. Methods, processes, and tools should be controlled at the lowest level possible—the team level.

  - **Response:** CMMI allows and provides guidance for how teams should be organized, what authority they have, etc. but that again should be entirely up to the organizations and projects adopting the model.

- **Misconception:** Compliance auditing is a complete waste of time and money and has no place in an innovative and Agile workplace.

  - **Response:** Unfortunately, compliance will likely always be a part of any/most industries. However, compliance for the sake of compliance, quality for the sake of quality, and similar mentalities are, now, effectively dead. Without performance and outcome-based results, compliance is pointless. Current business research data clearly shows that innovation requires discipline. (Reference: [The Hard Truth About Innovative Cultures](#)). Each aspect of innovation must be counterbalanced by tougher behavior that's less fun…rigorous discipline, a high level of individual accountability, and strong leadership. As we stated during the webinar, leadership must own and actively participate in making an organization truly Agile.

- **Misconception:** How do you reconcile the idea of self-organizing teams with standard processes?

  - **Response:** We are planning updates for CMMI V2.0 that provide best practices around this exact topic, see comments above.

# Additional questions? Please email [info@cmmiinstitute.com](mailto:info@cmmiinstitute.com)