



Applying Agile Principles in the DoD: Sixth Principle

featuring Mary Ann Lapham and Suzanne Miller

Suzanne Miller: Welcome to the SEI Podcast Series, a production of the Carnegie Mellon Software Engineering Institute. The SEI is a federally funded research and development center at Carnegie Mellon University in Pittsburgh, Pennsylvania. A transcript of today's podcast is posted on the SEI website at sei.cmu.edu/podcasts.

My name is [Suzanne Miller](#), and today I'm pleased to introduce you to myself and my colleague, [Mary Ann Lapham](#). Welcome to our [ongoing series](#) exploring Agile principles and their application across the Department of Defense. In today's installment, we explore the sixth Agile principle which says, *The most efficient and effective method of conveying information to and within a development team is face-to-face conversation*.

First, a little bit about me and Mary Ann. Mary Ann's work focuses on supporting and improving the acquisition of software-intensive systems. For Department of Defense programs, this means assisting and advising on software issues at the system and/or segment level. She also leads the research into software topics that are germane to acquisition of software-intensive systems. In this case, she leads the research on removing and reducing barriers to adoption of Agile methods in the DoD.

My research focuses on synthesizing effective technology transition and management practices from research and industry into effective techniques for use of Agile and Lean methods in regulated settings like the DoD. So, you can see why we like working together.

All right, here we go, Mary Ann: Real-world Application of Agile principles in Department of Defense. For those of you listening, if you like what you hear today, there are already five podcasts in this series. We will eventually have 12, one for each agile principle behind the [Agile Manifesto](#). As a reminder, the four values and 12 principles of the manifesto can be found at <http://www.agilemanifesto.org>.

Okay, start us off, Mary Ann. Face-to-face conversation, something that we all love—well, some of the introverts may not love it as much as others—but something that we know is effective for team communication in general and is so important to Agile that it is put out as one of the principles. How do we deal with this in the DoD?

Mary Ann Lapham: How do we deal with this in the DoD? Well, first off, a little history on this. When the Agile Manifesto and its 12 principles were coming into being, they actually believed face-to-face meant literally face-to-face in the same room, across the table, shoulder to shoulder, touching each other, if you could shake hands and actually talk that way. That was 10, 12 years ago now. Back then, there was the beginnings of some of the collaboration technology we have today, like [Skype](#) and all that kind of stuff, but they didn't have a lot of it.

Suzanne: What we now call [telepresence](#)...

Mary Ann: Telepresence, yes.

Suzanne: ...was not really the focus of how people were doing business.

Mary Ann: No, and people were kind of skeptical, and it was not the same. So, face-to-face, because the teams were small, made a lot of sense. Well, since then, teams have gotten a little bit bigger, i.e. multiple teams, multiple locations.

So, how are you going to do this? Well, you can do it, obviously, the same old-fashioned way, face-to-face, all in the same room, same building, same floor. Or, you can use telepresence technology, and a lot of teams today put up a TV screen on the wall, and that's the representation of whoever is in another time zone or another room, another building.

Suzanne: And picture-in-picture is wonderful.

Mary Ann: Yes, and picture-in-picture is wonderful, and people have it on all the time. If you need to talk to Sam who is in the other end of the country and you are in D.C., you get up and say, *Hey, Sam, are you there?*, and Sam pops up and says, *What you need?* And, you have your, telepresence-facilitated discussion, just like you were in the same room. Now, you still need, at least once a year—and some people say more than that—but at least once a year to have everybody in the same place.

Suzanne: There's a bunch of research that I got involved with years ago on a topic called [Computer Supported Cooperative Work](#). There's lots of things that say that there are certain kinds of interactions that need more bandwidth. Email is about the least bandwidth communication vehicle. Then, you go to telephone. We've got a little more bandwidth. You got to video where you've got a little more bandwidth. Video sharing, you've got a little more bandwidth, but the most bandwidth that you can get, in terms of understanding what people are saying and what they mean, is face-to-face.

So, that idea of making sure that you've got high bandwidth is how I interpret this principle. For face-to-face, I interpret that as, you need high bandwidth means of communicating because you're really working fast, and you are really going for understanding of a significant nature. You are substituting the high bandwidth verbal communication for some of the documentation that other methods use as a way of getting important ideas communicated.

Mary Ann: Right, and if you are having face-to-face conversations, as we all know, if you say something, and I don't quite understand it, I can say, *What did you mean by that?* Now, if you're reading in a document, you may have that question, and then you have to send them an email or something.

Suzanne: Or, more importantly, when I say something, and you don't understand it, I can see something on your face that indicates that. I've got that bandwidth, too. I can't see anything if you're reading it when you crinkle up your eyebrows. I can see that if we're talking.

Mary Ann: And, you can see that on a TV [television] screen.

Suzanne: And, I can see it on a video.

Mary Ann: ...on a video, so that you can say, *They're not getting that.* You can tell by their body language, by the look on their face.

Now, how does it work in DoD? The same way it works in commercial. Now, think about this. DoD has installations all across the country and the world, and these people work together all the time, have for years and years and years, and they've always managed to make it happen. It's not any different than what they're used to for other things, except we're now applying it in a software development world.

They are going to have more technical discussions, and sometimes, you might even want to set up so that you're sharing, not only the video of each other, but sharing what you're writing on a blackboard or...

Suzanne: Smartboards is a new technology that people have started using.

Mary Ann: ...so that you can see what people are writing, and people can share that together, and then you can say, *No, no. Here's the formula, and you need to change this point to that point.* There's a lot of technology now that enables that, that makes us a lot more [of a] close community than it was years ago.

Suzanne: So, when people talk about this in DoD software development, one of the things that they worry about is security. Another thing they worry about is, in today's environment,



in 2014, we have to worry about travel restrictions that would prevent some teams from getting together face-to-face, when in other times, they might have been able to do that.

I'm very encouraged, I have to say, by the creativity of the Agile development teams that we've seen in doing this. We know one program that has offices in Florida and Georgia and Missouri and New Jersey, for example. They are the ones that use the television. They use the [GoTo Meeting](#) or [WebEx](#) types of screen-sharing kinds of things. Their daily standup meeting is a daily phone meeting, but they've got some protocols in terms of making sure that everybody gets heard.

I think that's one of the things I'd like to say is that, if you're aware of this bandwidth thing, then one of the things you really want to do is to make sure that everybody on the team understands how to get their voice heard. Because, when you go down to the lower bandwidth methods, with telephone only, you need to have ways of making sure that people don't talk over each other, and that the people who do have something to say know how to say it. You know, just a simple thing. I know you've been on telecons because we've been on them together where everybody just kind of chimes in. You know, *Susie's here. Mary Ann's here*, and you get all this voiceover. Just doing a simple roll call and going down the list and making sure you know everybody knows who's here and who isn't. Really simple thing, doesn't take a lot of time, but it makes sure that everybody knows who is and isn't on the phone. So, you don't end up talking to somebody who isn't there or vice versa, saying something that somebody else needs to deal with.

Mary Ann: Phone etiquette is something that is not taught very much within the business world. Years ago it was, and we've gotten away from it. So, we have phone etiquette, which we need, but we also have to have this teleconference etiquette, and if you put that in place up front: *here's the ground rules, here's how we do it*. Just like in a regular room. You go around and first it's person A's turn to talk, and then you go to the next person, next person. So, that rotates, not only around the room, but then to the next location.

Suzanne: Whoever is on the phone.

Mary Ann: Yes, and then to the next and the next. As long as you have that etiquette in place, and you make sure you enforce it, it is not any different in some senses as being in the same room. Now, we all know that being together means that after work we can all go out for a beer and get to know each other a little better and know what things make you tick and not. That's important, but in today's environment—especially with the constraints in resources that we have in the budgets, no travel and all these other things—it's becoming less practical.

Suzanne: Years ago I worked for an Irish software company, and the development team was in Galway, Ireland and I'm in the U.S. doing deployments, but I had a lot of interaction with the team. We had a daily "coffee call", where it's sort of like a coffee break. No business. We didn't

talk any business during coffee call. So, everybody has their coffee, but we're doing it on IM sessions. You know, it's an IM chat kind-of session for 15 minutes and talking about U.S. football, Irish football, everything else but [business].

It had a huge effect because I could only go out there physically once a year. It had a huge effect on understanding each other as people and those kinds of things. That's the other thing I guess I want to say is, understanding people that you brought up and what makes them tick. That's an important aspect of team development. So, that face-to-face conversation, I believe that's another reason that that face-to-face high bandwidth is one of the principles, because this is a human-centric endeavor.

Mary Ann: You just made me think of something. You would think, especially in our DoD environment, they are big on building teams. They spend oodles and oodles of time training their teams, getting them to work together, to work as a team because when they go out in the field to do the things they do in operations, they need to know that the others in the team have their back. They need to know, *If I do this, he's going to do that.* It's the same thing here, except it's in a different environment.

It shouldn't be that much of a leap for the folks in the government, especially DoD, to implement this kind of thing in the development environment, especially if they have some active duty people or people who have been active duty or even people who work with the active duty. You know how they think. They are just highly trained. This is just another instance, another application of how to, you know, implement that kind of thing.

So, it shouldn't be that big of a deal. When I started doing this whole agile thing, I was at my very first agile conference, and I drove everybody crazy because anybody who would talk to me, I would say, *So what about this agile thing? Can we use it in DoD?* I had one guy look at me [and say] *So, what's the big deal? They do it all the time. It's commander's intent.*

Suzanne: Yes, the operational side knows that...

Mary Ann: The operational side knows how to do it.

Suzanne: I have never done it, but it's tempting to take these principles and kind of adjust them a little and take them to somebody that works in operations and...

Mary Ann: ...and see what they say.

Suzanne: ...in our copious amounts of spare time.

Mary Ann: It's not that big of a leap, I don't think, but they have to start thinking about it in terms of what they already know and say, *Oh, that's just another application of what I do now.*

Suzanne: The one thing I will say is that teams that don't pay attention to this do have trouble. We have seen that as well.

If the primary means of communication is phone only—without some other screen sharing, without some other way of understanding what's going on or tons of email and not a lot of even voice communication—you really are reducing the bandwidth, and you are going to reduce the ability of the team to deal with problems and to deal with the issues that inevitably come up because that's when you need people to have your back.

This is a principle that in my mind— you can get support for it, I think, better than maybe some of the other principles—but you've got to ask for it. You've got to know that that's what you need to pay attention to, and you've got to pay attention to it.

Mary Ann: Well, and getting the support may require a little bit of investment in infrastructure because not everybody will have those tools available. I mean, we all probably have VTC [video teleconferencing] available to us, but to have it available 24/7, basically, for the one team.

Suzanne: Or, dedicated to a single team.

Mary Ann: Yes, dedicated to that one team, always for that team to use. That's an investment.

Suzanne: Yes, that is an investment.

Mary Ann: They have to be willing to make it, or it will cause problems.

Suzanne: But, it's a lot cheaper than travel, if you aren't going to be able to do monthly or weekly or whatever co-location, that often is much less expensive, even if it is a bit of an investment.

Mary Ann: That's true.

Suzanne: All right. I think we've probably beat this horse to death.

Mary Ann: I think so.

Suzanne: Thank you for joining us today, Mary Ann.

Mary Ann: You are welcome. Enjoyed it, as usual.

Suzanne: In our next episode, we will explore the seventh agile principle, *Working software is the primary measure of progress*. Here is the agile philosophy on measurement coming out. That will be interesting.

Mary Ann: That will be fun.



Suzanne: Listings for papers, blog posts, and podcasts related to the SEI research on Agile adoption in DoD can be found at sei.cmu.edu/acquisition/research.

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Editor's Note: This podcast has been edited to increase readability and to update hypertext links.