16. Schlake & Hannan: Innovation – When 100% Success is Not the Goal

[music]

00:01 **Dr. Oliver Schlake**: If you remain top of your industry, by definition you have to innovate because the competition is eating you up.

00:10 Michael Hannan: There's a bigger and bigger slice of the project management world that is gonna be more heavily dependent on innovation. And if you see that coming the way I do, you're gonna wanna figure out how to embed this kind of random collision, liquid network-type ideas, within your project teams.

[music]

00:30 Speaker 3: From the Washington DC chapter of The Project Management Institute, this is PM Point of View, the podcast that looks at project management from all the angles. Here's your host, Kendall Lott.

00:40 Kendall Lott: Organizations today face a hard truth, innovate or perish. This means you, project managers, must embrace experimentation. It means bringing in team members with diverse skillsets and exposing them to external input. As leaders, we're called on to make allowances for experimentation and failure. I recently had an opportunity to speak to two key thinkers in innovation in the DC metro area. Dr. Oliver Schlake, a preeminent futurist in Germany is a senior business consultant and entrepreneur and a clinical professor at the Robert H Smith School of Business at the University of Maryland. Michael Hannan is the CEO and founder of Fortezza Consulting. His background in project portfolio management started at NASA in the early 1990s, supporting large, complex initiatives such as space systems development and defense weapons programs. He is also the lead author of the recent book, The CIO's Guide to Breakthrough Project Portfolio Performance.

[music]

01:41 MH: This notion of, "How can we plan for predictable, reliable innovation?" Is key. And so in my earliest days, when we'd go up to the White House and Congress, at NASA, and say, "We think this program to go to Mars is gonna take 20 years and cost $60 billion." It was 98% guess work, which happened on the space station. Originally, in the Reagan years, NASA went forward and said, "10 years, $8 billion, no problem." And it took more like over 20 years and something like $60 billion to finally have the space station flying.

02:18 DS: I was born the week Star Trek aired on TV the first time. And I don't believe in astrology, but something struck me there and I said, "This is an innovative concept on so many different levels." And I realized that innovation is far beyond just the mechanical devices of the technology. It has so much influence in how people live and culture and attitudes. Just the innovation that takes place in my home country, Germany, compared to the US, it's a whole different ball game how

people approach that.

02:50 KL: So what are those key generic elements that frame the concept of an innovation environment?

02:54 DS: Right. One of the things that is very typical to the US in innovation, probably not to everyone, but people here like to experiment much more than they do in Germany. This is more revolutionary innovation that we see. People try to do new concepts, people are willing to take risks. The audience also for this innovation, is willing to buy a product that is 80% ready and then just test it and see what the next version is. Whereas in Germany, the whole education in engineering, the engineering attitude, is evolutionary. We are looking at things and making them better, making them smoother. You'd hardly find German cars that are way over board, innovative. It's all there, but when you see it it's done very nicely.

[music]

03:49 KL: Can there be such a thing as evolutionary innovation? What is the nature of innovation that we're actually talking about here?

03:54 DS: I think increment proof is an important part of innovation.

03:57 KL: It is innovation.

03:58 DS: I look at Edison, that most people would consider an innovative person. Most of the things he did was not revolutionary at all. He was just a guy who made the light bulb work. He didn't even own the official, ordinary patent that introduced the concept of an illuminating fiber within a bulb. So he was the person who saw the business side of the house and looked at these things and said, "If we make this work reliably, we can actually make a business of it."

[music]

04:29 KL: What do you think about this from an evolution versus a revolutionary point of view, can you plan for revolutionary?

04:34 MH: So they're finding more and more that you can plan for revolutionary. And it's interesting, to key off what Oliver said, the evolutionary we often think of as the experts within a given discipline are incrementally adding interesting, new ideas. But you can also have evolutionary innovation by having some cross-disciplinary input. Now when you start, though, mixing across disciplines, you then also open up the additional channel for revolutionary improvements. And the key that they're finding now is when you do that, and you create a big enough network of the cross-disciplinary experts, numbering in the millions of collisions, let's say, of interesting ideas, 98% of which might be garbage. But if you get through enough of those to get to the 2% that are brilliant, then you can begin to plan predictable innovation that is revolutionary, as well.

05:24 DS: But in some disciplines, bringing in experts from the outside is already the revolutionary part. The best hire I had all my life was a physicist. He had no consulting experience whatsoever, but he wanted to get into the field of consulting. The physicist, by design, is someone who experiments for a living. So his framework of trying new things was a complete different one than

the classic MBA-type consulting students who wants to get this done right. And he was completely open, "Let's try this. Let's fail quickly and let's do something new, adjust the experiment, and try it again."

06:05 KL: He sounds like the kind of guy you'd want for this collision of ideas.

06:08 DS: Oh, he was right in there.

[music]

06:16 MH: I think the biggest mistake most R&D organizations make is they think that as long as they create the right internal environment for however many people they have inside, then that's the most you can do to foster innovation and creativity. When the most critical part seems to be this larger external environment and how your people are interacting with it. Liquid network is a term I'll borrow from Steven Johnson, from his 'Where Good Ideas Come From' book. And basically, the definition is, some environment that allows for a massive amount of collision of very fine-grained ideas, where they might mix and match in all sorts of interesting combinations, all sorts of permutations and allow for a large volume of failures and perhaps a small volume of good ideas that combine to form really innovative breakthroughs.

07:11 DS: You know where we can see this already in place for the last four billion years? That's nature.

07:18 MH: Nature. [laughter] Yeah.

07:21 KL: This is how mass is created.

07:22 DS: We are just the... All of us here in the room, we are the surviving experiments of millions of our ancestors.

07:32 MH: But I would argue that, as human beings, we can actually channel it. My favorite example is the rock tumbler. Where you might take the example from nature, say how an ocean and sand in the ocean, polish rocks. It's rare you'll come upon a rock on the beach that isn't nice and smooth. I don't need an ocean to do that. And in fact I can create a mini-ocean inside a coffee can, put some rocks in there and some sand and water and I can generate a controlled environment with massive amounts of collision. And every single one of those collisions is unpredictable. And most of those collisions have no polishing effect on the rocks, whatsoever. But I know that I'll have enough that do, that by tomorrow morning I'll have a canister full of polished rocks. So the question is, "How do we create that canister for our organizations? And how do we ensure that that liquid network, that's inside that camp, is something that we can build in our organizations that touches out to the broader networks that are out there?" Before the internet, that was much, much harder to create these vast communities of cross-disciplinary experts that might actually, serendipitously collide into ideas that might be terrible, but a few are gonna be brilliant.

08:55 DS: Well, if you look then culturally, you need to have people who are also okay with that, because if you are...

09:02 MH: And a willingness.

09:02 DS: Yeah, well if you are a sophisticated R&D guy sitting in your lab, you got hired for your specific expertise and then your CEO comes around and says, "You know what? I think you're good, but let's see what's out there." So there is the personal touch that comes in there. So you need to change... We're back a little bit in the culture-leadership area there, you need to change the attitude that it is okay to look outside. And we need to find these mechanisms to bring these ideas inside. And the engineer of the future may not be the subject matter expert, but may be the master networker. It may be the person who appreciates other ideas or takes an idea that is half way and moves it forward to be utilized.

09:49 DS: The idea of open innovation is that ideas that you produce can be... For example, if they don't seem to be successful what are we gonna do? Then we have to shelve them, we've invested in them. But instead, there are a lot of websites and models out there right now of companies who have a half-baked idea would say, "Look, we have this idea. Here, community, take part in it. We own the patent on this idea." GE is doing this with Quirky, an online development platform. They say, "We have all these patents, but we don't really make business out of that." And so they're giving it to an open community, and they say, "Here's the patent. You can use it, make a product with that. We share the rewards for that."

10:32 MH: The car company, Tesla, recently did that, released all of it's patents or almost all of it's patents, for public use and building this whole electric car movement beyond just it's own closed R&D labs.

10:44 DS: Tesla is very smart in doing this because they know the corporate value for them creating a network and a movement towards the products they produce is more important than the preservation of the intellectual property.

11:04 KL: So we've got all this cultural stuff, I understand that, now get me to what a project manager should be doing about this.

11:09 MH: I'll take a simple example, let's say I manage a small portfolio of software development projects. So I've got 100 guys working for me developing software and maybe even most of what I do is relatively straightforward, follows traditional project management execution plans. Maybe it's got some innovative team-based approaches like Scrum or Agile or something like that.

11:30 KL: 'Cause that alone is not enough to define the innovative space here.

11:32 MH: Correct, correct. But then there's still going to be this question of some subset of my projects is gonna demand some innovations. "How can I get something to market in a reliable way? How can I commit to Congress that it will only be $8 billion and not $60 billion?" I might not know the answer at this very moment, but I do know that if I have the right environment for my people, the right platforms for both collaboration and competition, not only internally but with a broader liquid network and this right encouragement. I would say within six months to a year, I'll have a pattern. I'll have a baseline. "How many innovations do I deliver? How would I characterize those innovations? Are they small evolutionary ones? Do I get one big dramatic one per year that's more revolutionary?" And the patterns in nature have shown us that that becomes very predictable and measurable over time. Just like the polished rocks by morning.

[music]

12:28 DS: The one thing that I've worked on in the past a lot, is to connect the R&D world and the strategy world, which are usually disconnected, as strange as this sounds. So the strategic group says, "We have $20 million for R&D. That's what we wanna invest. Give us some ideas." And then magically it's always $20 million worth of idea, [chuckle] that we know. But here's a different approach, where we say, "Look, tell us before we make the strategic decisions, what's in your pipeline? If we are considering even $20 million of projects for you guys, show me 10 times or three times more ideas, and then we'll pair you up with a business person... " So the strategy here comes in where you plan this, but we also wanna commit a certain amount of stuff for the cool, the sexy stuff. And then the strategy folks can say, "Look, we have, finally, a budget here and now we have choices because you delivered us three times the ideas. And we can jointly now make choices of all the things you have." And then in great open innovation, these choices come from outside, come from the inside. And the choices that I've not used this week, or this month, or this year, we're not gonna shelve them and throw them away. We ask, "Well, what else can we do with that?" And throw it out to the people who may external to us.

[music]

13:54 KL: So what is needed in the leadership to make these decisions that set this culture, that allow this project manager, require this project manager to operate in this way?

14:04 MH: So I think... Let's start with what I view as the most critical element that the leadership has to make sure is in place, and that is a different kind of project manager. Because if you have a kind of linear thinking, engineering-oriented, PM that just wants a sequence of tasks that can be executed, that no longer is sufficient. It's not that the linear, task dependencies don't matter anymore, it's that the innovation part that must feed it and make it reliable, is not linear. And so leadership has to bring them in and coach them into that place.

14:35 KL: It requires many.

14:36 DS: Those PMs have to get into the tumbler first.

[overlapping conversation]

14:38 KL: So the culture feeds this chaos leading into the sequential thinking to actually do the production, if you will, but the PMs gotta be open to that.

14:46 DS: You can create this kind of safe environment for the people that report to you. It's the Kelly Johnson model of early Skunk Works in Lockheed Martin. He says, "Don't mess with my people. You come directly to me, I'll stand up for that. If we mess it up, it's my name that's on the chopping block but do not interfere with what they're doing 'cause you don't understand what they're doing." So he backed them up, it's a classic model.

[music]

15:16 KL: The idea may be the thing that fails. What we're hoping for still is that the process, getting the idea to a level to determine it failed, should not fail, right? So it's a portfolio problem

more than a PM problem probably.

15:27 MH: But let's look at what's in common with the project world. What's in common with a well-run project portfolio is, one, we're actually balancing risk across the portfolio projects. And we're understanding that a 100% success may not be the right goal. And then the other thing is, the traditional classic PM, basically, holds his people accountable for task-level execution. Task-level execution is risky. So what a PM that holds his people accountable to task level results is doing is saying, "If you fail, I'm gonna clobber you." And I'm basically, shoving the risk down to the least efficient level. I'm not aggregating the risk I have, which of course is a key concept of project portfolio or any portfolio management.

16:13 KL: You mean keep risk at a higher level then?

16:14 MH: Yeah. So if I say, "Look, guys. I'm the PM, I'll own the issue." Just like the Skunk Works guys said, "You don't bother my people. You talk to me."

16:28 KL: So what's a project manager to do as they prepare to be part of the book written 15 years from now about what happened?

16:35 MH: There's a bigger and bigger slice of the project management world that is gonna be more heavily dependent on innovation.

16:41 KL: So what could they do?

16:44 MH: I need to have people on the team like the physicists that Oliver mentioned, that might not be traditional thinkers, might not have grown up in this domain, might be more experimentation oriented.

16:54 DS: As cheesy as the A-Team movies are from the '80s, [chuckle] the beautiful thing about the A-Team is you have four guys there... Which, missing the girls, but you have four guys there that have vastly different skillsets, right? They have a strategic mind, you have the human manipulator in Face, and you have the flying guy and the weirdo, and then Mr. T, at the end, is welding stuff. But these guys share the same focus on the task, but they emphasize it with different skillsets. So if you look at your own project management team, "Do you have that skill set there?" And then if you're not diverse not enough, bring somebody even from outside, or bring the outside in, virtually.

17:38 MH: So I think that the other key thing I would advise is, make sure you're in an environment that actually does all the things we've talked about today. You wanna be under leaders who understand that, "It's not my job to clobber my people for minor failures. It's not my job to push risk down on my people. It's my job to aggregate risk and protect them." And so if you can make sure you're in that kind of environment and you get your mind set to these new models of how to drive innovation reliably, then all of that, coupled with your project management skills will suit you quite well.

18:14 KL: Special thanks to today's guests, Michael Hannan and Dr. Oliver Schlake. Our theme music was composed by Molly Flannery, used with permission. Post-production performed at Empowered Strategies and technical and web support provided by Potomac Management

Resources. I'm your host, Kendall Lot, and until next time, keep it in scope and get it done.