

## 41. Brese, Cable, Balestrero, Schlake & Hannan: Looking Ahead

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**0:00:05 Robert Brese:** So, there's OpenProject as a solution. Open schedule is not a solution.

[laughter]

**0:00:11 John Cable:** As our project managers get promoted and become those executives, then they're going to be much better as executives understanding what the project teams need.

**0:00:21 Gregory Balestrero:** What we're talking about is sustainability of society, corporations, governments... How do we live on in a way that doesn't draw down on the principle?

**0:00:34 Oliver Schlake:** If you remain top of your industry. By definition, you have to innovate... I mean that is because the competition is eating you up.

**0:00:42 Michael Hannan:** There's a bigger and bigger slice of the project management world that is going to be more heavily dependent on innovation. And if you see that coming the way I do, you're going to want to figure out how to embed this kind of random collision liquid network-type ideas within your project teams.

[music]

**0:01:02 Kendall Lott:** Today's episode is actually a compilation of some of the first episodes of PM Point of View we did back in 2014. For those of you who've been listening to the PM Point of View since the beginning, this will be a good review. For newer listeners, there's a lot of interesting stuff here. And you may not have listened to all of the smaller individual episodes. First, we have Robert Brese, who was then the CIO, Chief Information Officer, of the Department of Energy. And he tells us what he looks for in project managers. Then, we have John Cable, Director of the Project Management Center for Excellence at the University of Maryland, where he discusses the value of studying project management in an academic setting. Greg Balestrero, CEO Emeritus of the Project Management Institute talks about sustainability and project management. Then, we wrap up with a fascinating conversation about innovation and project management with German futurist, Oliver Schlake and writer-thinker practicing project manager, Mike Hannan.

It's interesting for me to find here some of the core threads and themes that have surfaced in subsequent podcasts. So while I'm pursuing my current project – hiking the Appalachian Trail – we can all keep our PM chops in shape.

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**0:02:10 Speaker 7:** 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.

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**0:02:22 KL:** PMs with certification know the rules of the road, that is those methodologies of delivering projects within established constraints of scope and schedule and cost. But we wanted to know from an executive point of view what's missing. My first guest, Robert Brese, was the chief information officer of the Department of Energy at the time of this interview. He has three decades of service in the US Military and with the Federal Government. As CIO at DOE, he oversaw a \$2 billion IT budget in support of the Department's Science, Nuclear Security and Cyber Security programs. From policy to governance to budgeting, Bob has seen it all. PM Point of View wanted to know what matters most to him as an executive when he's engaging with project managers. It turns out the answer isn't in the PMBOK.

**0:03:03 KL:** So how have you seen the use of project management in delivering the goods and services?

**0:03:08 Robert Brese:** Project management is really, I think, critical to delivering almost any outcome. Even if it seems small, the use of the project management fundamentals are critical to success. If you try to wing it, no matter how small or insignificant it seems at the time, chances are you won't always deliver to your boss's expectations.

**0:03:33 KL:** And you're usually that the boss that has the expectations is what I'm hearing you?

**0:03:36 RB:** That's right. And so, you have to make sure that those expectations and the perceptions of those who are executing the project are aligned. And leveraging project management principles tends to help align those two things.

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**0:03:54 KL:** In that set of things when you say project management principles, what's one of them that's the most interesting or most important to you when you're getting that feedback about how projects are going?

**0:04:02 RB:** Well, first, I think it is, what is the outcome that is expected at the end of this? If you don't agree on the outcome and don't have a common understanding of what the project or what the activity is supposed to deliver, you can almost guarantee failure on delivery day. I think the second thing is, what's the schedule? So, there's OpenProject as a solution, open schedule is not a solution.

[laughter]

**0:04:29 KL:** So how do you feel about Agile?

**0:04:31 RB:** I think Agile is awesome.

**0:04:33 KL:** But it's an open schedule scenario?

**0:04:35 RB:** Yes and no, okay. Yes and no, because every time you do a release or a Scrum, there is

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something that is supposed to come out of it. And you and that team should have an agreement as to what you expect to come out of it. Now, a lot of times, you won't necessarily deliver everything you had hoped for, but you know what the gap is, you know what you were able to accomplish, and what needs to get fixed or what gets rolled into the next release.

**0:05:03 KL:** How do you align your expectations of what should be delivered and the fact that Scrum, for example, might be producing with a gap?

**0:05:11 RB:** Well, I think what we saw through some of our infrastructure improvements was that initially the team might think they can get more done in that Scrum time period than they were really able to get done, that there are unanticipated difficulties. And as we got further and further along, that gap tends to narrow and get smaller because the team better understands its own capabilities and is really better equipped to match expectations with what they're able to deliver. So I think through Agile, particularly every time a new project with a bunch of releases gets started, is you're probably going to have a larger gap at the beginning in the initial releases than you do in the later releases as the team coalesces and really understands what its capabilities really are.

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**0:06:06 KL:** So, you're using some Agile here in this department with your current environment? Is that where you've seen some of it?

**0:06:11 RB:** Correct.

**0:06:12 KL:** Do you have the sense of how much versus how much in more regular PMBOK-style project management, tight schedule and scope?

**0:06:21 RB:** A lot of what we do is market research, alternatives analysis, selection of a preferred alternative, develop an implementation plan, execute the plan. So, that's a little bit different than trying to deliver capabilities through releases of new software or new capabilities and things like that. So it's a mix. I would say we're probably closer to 70% traditional PMBOK-type work, 30% more Agile work.

**0:06:49 KL:** Are your deployments under project management control when you're doing a deployment or a rollout to field?

**0:06:55 RB:** We have a project execution model that we have approved. My team developed it back when I was in the National Nuclear Security Administration. We've carried that forward, we've issued it as a Department of Energy IT project management guide, and what that does is take the traditional PMBOK approach and align it towards information technology projects. And it really provides critical decisions and milestones that we expect to see particular deliverables. And you can compress those, you can combine them, you can disaggregate them into A, B, and C steps, if they're very complex. So it's pretty flexible, but it is PMBOK-based. And we've found it to work when it's used.

[laughter]

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**0:07:48 KL:** From an executive perspective, do you get frustrated with the interaction with project managers, in terms of what they see as their scope and what you see in terms of your need?

**0:07:58 RB:** Truthfully, I really get frustrated with project managers when they blow off project management principles. And you go ask them, you go, "Well, when you put together your plan and you looked at the potential risks to your plan, why was this risk not accounted for previously?" And there may be an explanation for it, it's an unforeseen risk. However, if the response is, "Well, we really didn't think it would be that big of a deal." It's like, okay, well that's still a risk. It may be a low risk, and it may change through the progression of the project, but I think mostly, we get frustrated with risk management.

**0:08:39 KL:** I've circled on my notes to you that I actually want to talk to you about risk, [laughter] so you've walked right into an open door there. So how have you seen project managers handling risk? And how do you see risk in comparison to that?

**0:08:53 RB:** We do use a risk register approach, and when my project managers come brief me, one of those areas is on risk. And so that's one of the key items that they're supposed to address with me each time I get an update on a project. What are the accomplishments? Where are we on cost and schedule? Have we had any scope changes? What are the upcoming activities? And where are we on the risks? We will see those risks go up and down in what we anticipate the probability of their occurrence. We see the severity of the risk, if it's realized, adjust as the project moves and as more information is gained during the project. But I wouldn't say there's much of a disconnect on risk. It's usually the unforeseen things or the not-considered risk.

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**0:09:51 KL:** So you think the risk management approach is actually effective or sensitive to the variables that it purports to see?

**0:09:57 RB:** It is. It is dependent, somewhat, on the experience of the project manager and the team that surrounds him or her. And I think that's why when we look at the certification of project managers, whether it's in defense or in energy through the Federal Acquisition Institute certification process, is that there are different levels. Because as projects get larger and more complex, you need a project manager who has enough breadth of experience that he or she can account for a broader set of potential risks. In a small project, it's relatively simple and the risks probably aren't that critical to the success of the project. But as you get into larger and larger projects, not only on the dollar value, but on the complexity or the significance to your mission, some of the risks aren't obvious and they may not be direct risks; they're indirect risks. And there may be risks that have dependencies on each other, and so that requires someone with experience. And I think that goes to the whole concept of critical thinking. When you start drilling into a project manager's thought processes and you run into walls very quickly, then that project manager is not likely to be ready for a large complex project.

**0:11:18 KL:** So you just went to a skill set or a competency which is around critical thinking, so it's not about one of the silos or knowledge areas. It's more broad-based. Do project managers get that in the type of training they see, or is that a separate type of training and education that people need to get with that?

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**0:11:33 RB:** If you read some of the academic research papers on critical thinking, a lot of them reach back into breadth of experience. If you're giving a brief and you get asked about a PowerPoint slide you've developed, you ought to be able to answer the question. If there's a follow-up question and you can't answer it, then your knowledge is pretty shallow. And so being able to answer that third level question generally gets you out of further questions, and the same thing goes with projects and risk. "Have you considered this?" "Yes. In fact, we did X, Y, and Z." Okay, well, now I understand the logic behind that answer. I really think that comes with breadth of experience. If there's one thing that I think has helped me be moderately successful is the fact that I've had a lot of different jobs in a lot of different occupational areas. And so, I bring those to an IT project, I ask questions around things I may have learned in physical security or weapons, or facility operations, or something else.

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**0:12:45 KL:** Now, are your projects largely in isolation or largely in your control, the control underneath your organization or do you have stakeholder influence? Or are they just a risk?

**0:12:55 RB:** Clearly, stakeholders always impose a risk to the project that has to be managed, whether stakeholders show up as a line item in your risk register or not. But sure, there's an owner, there's a project manager. But that project manager has to ensure that the stakeholders buy in and that goes back to managing the delta between expectations and perceptions, and particularly because the boss, the one who may own the outcome, has an expectation. The project manager's perception may be perfectly aligned with the boss's expectation, but if the stakeholders, who are going to support the project along its path and support and celebrate the delivery at the end, if their perceptions aren't the same, or managed, or realigned where necessary, then the project generally doesn't come off as a success.

**0:13:53 KL:** Who owns that expectation setting, the boss, or the owner you just described, or the project manager?

**0:14:00 RB:** It's mostly incumbent on the project manager to do that.

**0:14:02 KL:** So you see them as executing that?

**0:14:03 RB:** Right. It's their job to execute. I think it's the boss's job to question and poke at the project and the progress and ask the hard questions about, "Are these things coming into alignment?" Where they were perhaps not aligned.

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**0:14:24 KL:** And then the punchline. Bob reflected on "If project management had never been invented, do you think you would have been as successful as you have been?"

**0:14:32 RB:** So, I would say no.

**0:14:33 KL:** No.

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**0:14:34 RB:** Maybe we would've figured it out through common sense but I like to joke and say that if common sense were true, we'd all have it.

[laughter]

**0:14:43 KL:** Right. Not so common.

**0:14:45 RB:** Not so common. So I think project management helps instill that common sense and the structure that's necessary to be successful.

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**0:15:06 KL:** Many of us think of project management as a practitioner's art, it's about getting things done. So I'm curious as to how it's also now a field of academic inquiry. I'm told that in 1999, there were roughly 12 universities that had degree programs in project management, and now there's 600. One of the early educators is Mr. John Cable, and we're lucky to have him in our beltway area. John is the director of the Project Management Center for Excellence at the Clark School of Engineering at the University of Maryland. A licensed architect and general contractor, and a PMP, he has quite a history with project management, with academia and the intersection of the two. He's the chairman emeritus of PMI's Global Accreditation Center, which accredits project management degree programs around the world. A member of the Science and Engineering Council of NASA's Center for Program and Project Management Research. And he's a founding member of the International Project Management Educational Union. John sees the world from an interesting point of view. A practitioner, and an educator. And if you met him, you'd think he's a PM proselytizer. So we have the right guy to give us the insight but still, what is all this study telling us about the role of project management in the future?

**0:16:14 John Cable:** The program at the Clark School really is distinctive. It's based on a master's degree program, there're two masters: A Master of Science or a Master of Engineering. Each requires a minimum of 30 credit hours of coursework. That coursework has five core courses that are... You could probably name them all: An introduction, a law course, an accounting course, a teams course, and performance management. How do you measure project performance? Project performance management is...

**0:16:45 KL:** Let me make sure I understand all that, you mentioned, for example, law and economics around project management.

**0:16:50 JC:** On project management.

**0:16:51 KL:** Interesting. So what would be an example of the content around law and project management?

**0:16:56 JC:** Most people that are involved in projects and the project management arena are dealing with contracts. So, it's a law course aimed at engineering contract law taught in the construct of the American law practice.

**0:17:10 KL:** And even the economics of it, I assume you are talking more than the pure cost of a project. You're talking something broader in that case?

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**0:17:16 JC:** The name of that particular course is Project Cost Accounting and Finance. And the notion is, we're not trying to teach the student to be an accountant at all. What we are trying to teach them to do is to read what the accountant produces and understand what it means. And then, the other piece of that course is a little bit about how projects get financed and what are those metrics and how do they influence decisions, perhaps, you need to make as a project manager. We also have a PhD and they draw from the same courses. But of course, a PhD student does a tremendous amount of research on their own.

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**0:17:55 KL:** What types of topics have you seen in that?

**0:18:00 JC:** We have a complete range from stuff that focuses on the human factor side and dealing with negotiations, conflict resolution, how do you build high-performance teams, and things that are what you and I might think of as the softer side of the subject...

**0:18:18 KL:** Organizational design...Organizational development...

**0:18:19 JC:** Yeah, exactly. And then, there's a healthy number of students that do work in risk analysis and scheduling and they're doing all kinds of quantitative analytics on some aspect of projects. And then there's a policy grouping. So the interesting thing is that project management is a very big umbrella, and there's not one little niche or one little channel that we can cover in a PhD or a master's thesis.

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**0:19:00 KL:** Is the goal then to raise the level of project management understanding or is it more to find where all project management can be applied? I'm trying to see why is there an academic track, fundamentally, why do we need this?

**0:19:12 JC:** The reason that project management degree programs exist is in response to customer demand. I try to interview incoming master students and I say, "Why do you want to study project management?" Here's the generic answer, "Well, sir, I'm a, fill in the blank, mechanical engineer, fire protection engineer, whatever, and I've been out of school seven years. I'm in a work environment where I'm really comfortable with my engineering skills, but I've begun to be given assignments where I have to manage other people. I have to manage tasks, I'm going to be in a position where I have to manage projects. I don't know what I'm doing." I really believe pretty strongly that in our community, our kids come... I want them to get their undergraduate in mechanical engineering or electrical engineering or civil engineering or architecture, whatever it is. Then I want them to come back as a master student. [chuckle] Add to that basic technical skill, the project skills.

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**0:20:33 JC:** We don't teach them, "This is the answer," we teach them, "How do you approach it?" We teach people how to think about the problems. I've got two very seasoned managers in there; they probably have somewhere in the range of 15 to 20 years of experience, they manage a whole

bunch of people, whole bunch of projects, portfolios.

**0:20:53 JC:** And we're at the end of the semester. What I've gotten from feedback from these two individuals is, "I have learned so much because this semester has given me the opportunity to reflect and think about what I do, and you've shown me approaches to that that make a whole lot of sense. Some of this stuff, I did it and I don't know why I did it, I just did it. It worked, [chuckle] it worked but I did it. Now, I understand why it worked." We're trying to teach critical thinking skills, understanding the framework, how do you think about it, how do you diagnose it.

**0:21:31 KL:** That's really interesting and one of the other guest speakers that we've had for this podcast when asked, "What is the single biggest gap or what are the big gaps you see with project managers, or when do you get frustrated, where does the happy-land break down?" There were two comments that I felt were very interesting. One was when project managers don't actually follow their project management rules, that's the first one.

[laughter]

**0:21:54 KL:** When they're not actually following by their own rule set. But the other one was, ultimately, it's a critical thinking problem. That was the gap. What is your solution for that? Part of it sounds like training, is that something that can be taught?

**0:22:06 JC:** In the critical thinking skills, we're looking for individuals that have a very unique characteristic in one sense. And that characteristic is somebody that can think in the macro view and in the micro view, not either or, but to zoom in and out. They can keep their eye on the big picture, but zoom in on the detail necessary to make the detail things happen but do so in a way that they're not deviating from the big picture. And then, how do you be sure that...you know, a project unfolds over a multi-year period of time, the world changes, a lot of factors change, are the critical assumptions that were made to launch this project still valid? Do we need to go back with the customer and do some mid-course corrections? So we're really focused on helping students learn how to do that, to approach it that way.

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**0:23:05 JC:** When we got started, virtually all the master's degree programs taught fundamentals in project management because everybody wanted to know fundamentals. And now, there is always a continuing need for fundamentals, but there's an evolving need for much more sophisticated applications. To be candid, a lot of the students that come to us already are PMPs and they're trying to go further, they're trying to advance. And that's what we help them do.

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**0:23:38 KL:** Given that so many institutions of education now are engaged in more professional development and more development, it sounds like, of the practice itself. What do you anticipate seeing change in project management itself?

**0:23:52 JC:** I see a future that may be through rose-colored glasses, but it's one in which the individuals that are involved in project management have far superior people skills to the ones today. That they create an environment within which good people can flourish. I see that evolving



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as they get more well-educated and have a better understanding of themselves, how they interrelate with people, how to create the environment within which good people can do their jobs, and how to be a facilitator and then a motivator.

**0:24:33 KL:** Will we see a world where it's less project manager and more project teams? We really focus a lot on the manager as a communicator, but you're moving past communication into somewhat sort of a behavioral support.

**0:24:47 JC:** It's not the project manager that delivers the job. It's the project team that delivers the job. The manager has a critical role, and we don't want to diminish the value of that critical role. But every member of that team has a critical role. And every one of them has a project management responsibility that they need to own, step in and execute, doing so, thinking about the team as a whole, understanding their part in it. Leadership doesn't just happen at the top. Leadership happens at every level.

**0:25:21 KL:** So it seems like you may be teaching people to be better team members.

**0:25:25 JC:** We try to.

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**0:25:31 KL:** What's going to happen to project management itself? How does that change in the future?

**0:25:36 JC:** Project management as a discipline has become more interesting to more people, because they understand that no matter what job they're in, part of it has to do with getting the job done. It's no longer that, oh, the architects and engineers and the contractors, they need project management because they build things, but everything we do is a project in essence. And so, I think part of the evolution that's occurring is that the business world is beginning to embrace and understand more and more that they need to think about their world in the construct of "How do we get it done? How do we deliver projects?"

**0:26:24 KL:** The business community will start projectizing things more?

**0:26:27 JC:** Yes.

**0:26:27 KL:** Or seeing things in that lens through that lens...

**0:26:29 JC:** I think they're going to see it in that lens more than they are right now. I think they're also going to understand that they have to create the environment within which projects can succeed. As a corporate executive, what are the things you need to pay attention to, so that down the line, in your organization, projects can be successful?

**0:26:50 KL:** This is fascinating. So it's a business problem or business application.

**0:26:54 JC:** Yeah, and most of the university programs in project management are in business schools and I think part of the other thing that... The natural evolution that we're going to see is, as our project managers get promoted and become those executives, then they're going to be much

better as executives understanding what the project teams need.

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**0:27:27 KL:** With three decades of association leadership, Greg Balestrero is well-known to a generation of project management professionals. As the Chief Executive Officer of the Project Management Institute from 2002 to 2010, he's now a strategic advisor for a new program addressing corporate consciousness, leadership and sustainability at the International Institute for Learning. In 2013, he co-authored, along with Nathalie Udo, the book, *Organizational Survival: Profitable Strategies for a Sustainable Future*. And that caught my attention. Sustainability beyond the traditional environmental aspects, but also including social responsibility, economic performance and ethical behavior. It gets down to values. And he sees not just an opportunity, but a responsibility for project and program managers in creating a sustainable future.

**0:28:12 Gregory Balestrero:** My travel brought me to places all over the world where I saw challenges to the environment, to the social fabric of the world, certainly, to the issue of prosperity versus profitability, and an evolution in ethics. And it really struck me that there was no focused attempt to solve it. So I started to take a look at what the role that an organization had and also started to look at, "Can the organizational transformation have a positive effect on the planet and society?" As well as, "Will it contribute to their own survivability?" And that's what I spoke about for the last three years I was with PMI. Because I began to realize that corporations were doing things dramatically different and were planning for a future that was ripe with risks that could undermine all of these companies. And they're not small companies. There's companies the size of Coca-Cola and companies the size of Airbnb. I mean, they're all taking a different approach to the way business has to be run in the future to benefit the environment, society, their ethical posture and their focus away from pure profitability towards prosperity.

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**0:29:42 KL:** How do you define this sustainability or prosperity that you're after?

**0:29:48 GB:** Well, it's kind of like having a portfolio of money and you want to live off an investment. And you take as much as you can out of the investment without hurting the principle. There is a whole host of assets on the planet: People, the wherewithal to produce products for those people, cities, governments, all working together. And the survivability that I talk about when I talk about sustainability, is how do you sustain that core? How do you sustain all of the assets in it, not just the environment? We limit our thinking when we talk about environmental sustainability. What we're talking about is sustainability of society, corporations, governments. How do we live on in a way that doesn't draw down on the principal?

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**0:30:50 KL:** In fact, it sounds like you've discovered some corporations are actually making moves to accommodate all of this; that they began to see those larger prosperity issues. Was that surprising to you to find companies were doing it?

**0:31:02 GB:** I'm hopeful, put it that way. I saw companies doing things, and when I started to uncover what was being done, I realized there were thousands and thousands of companies doing

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things. The Global Reporting Initiative has somewhere in the neighborhood of 10,000 organizations that are reporting on sustainability, which is a phenomenal amount. The flipside of that is there's about 300 million registered businesses in the world. We've got our work cut out for us.

**0:31:31 KL:** You were also able to show that there was an improved economic performance for those that scored high on that survey, as I remember.

**0:31:38 GB:** Oh, sure.

**0:31:40 KL:** There was actually a correlation at least at the extremes.

**0:31:41 GB:** There is a lot to be said for it because one of the arguments clearly, the arguments of resistance to change is, "I don't want to spend money on something that's just a feel good thing."

**0:31:56 KL:** How's this get past feel good?

**0:31:57 GB:** It goes straight to the bottom line.

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**0:32:04 GB:** If you go to a zero waste strategic goal for all your operations, that will go straight to the bottom line. Zero waste in energy, zero waste in water, zero waste in product, zero waste in raw materials. Companies like BMW have their new factory that they launched in China. Their waste in the factory per car is less than 30 grams. 30 grams. It's a zero water waste facility. A net zero water facility.

**0:32:36 KL:** That's stunning.

**0:32:37 GB:** Coco-Cola, for example, when they were at their peak in the '90s, they were using 9 liters of water for every liter of product they produce. Their goal is to be water neutral by 2020. And they're doing it so that whatever water they have, they give back to the community in a drinkable fashion.

**0:33:00 KL:** But what you're indicating here is that this is a competitive advantage, then why aren't more companies doing it?

**0:33:06 GB:** It's because the threat is more than a year away. And if you take a look at the companies that have begun the transition, they're looking at the threats...

**0:33:15 KL:** The threat caused by not doing this.

**0:33:17 GB:** That's what it's about. Organizational survival. Should they not adapt? By the mid-21st century, water is going to be one of our most precious resources and virtually put companies out of business that haven't learned how to be water neutral. If electronics firms haven't learned how to get by with fewer rare earth elements, or find new sources for it, or find an alternative, in other words, innovate, they are going to be out of business.

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**0:33:51 GB:** Muhtar Kent, who is the current CEO of Coca-Cola, he was joint leader of the consumer products forum, which is a global forum of companies that are in the production of consumer products from Diet Cokes to Band-Aids, to whatever. He said, "I want some estimates about calculating what we produce, our 50 companies, in terms of carbon output in a given year." So he runs the numbers and he comes back for the next board meeting, he says, "I got a big surprise. The fact is that if you take your supply chain and all the carbon that you guys produce in one year and I add it up, it's equal to the carbon output of the entire country of the United States of America." 50 companies. So you can't tell me that companies can't have a positive impact on the planet when 50 companies are producing in their supply chain, enough carbon, that it equals the United States. If they said we're going to cut it back in 10 years by 50%, we'd have massive change in the environment. The role of government to me is to provide a gateway to that solution.

**0:35:03 KL:** How so?

**0:35:04 GB:** In incentives, in ways of encouraging them, and holding them accountable.

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**0:35:15 KL:** What can program managers and project managers see as their role as we move forward in this?

**0:35:22 GB:** Well, project managers, program managers, we'll start with the fact that they don't live, sleep, and eat, in the company. They're actually part of society and community. They are consumers first, they are parents, they are brothers and sisters and family members. They have a responsibility to the community that they live in. It's incumbent upon each one of them to have the literacy to be able to carry on this conversation, and I can tell you that they don't. They don't in a corporate context.

**0:35:53 KL:** Is that because of their alignment with companies, or the role project management tends to play in a company, or the nature of project managers?

**0:36:00 GB:** Yes, to all three.

**0:36:01 KL:** Oh no. We have so much to change.

[chuckle]

**0:36:03 GB:** Yeah. So I think that part of this is not a negative thing. I think we've gotten project and program managers to the point where they're becoming a stellar discipline. They're in the business of executing projects and executing them efficiently, and according to what the values are and the constraints are for the company.

**0:36:27 KL:** That was what I observed as I was reading the book and thinking as a project manager. This is about strategy and making sure it was embedded in activities aligned to the...

[overlapping conversation]

**0:36:33 GB:** Absolutely.

**0:36:34 KL:** Project managers, and I don't mean to make them sound too tactical, but they solve temporary endeavors and program managers obviously have larger life cycle that they're looking at, but they solve specific projects and problems and I think linking those two would be a great thing to hear you speak to. So how do they get to be players in the strategy?

**0:36:52 GB:** Number one is literacy; they should know exactly what their company's doing. Take for example, the BMW factory in China. A typical project manager working in a factory building BMW motorcycles in Berlin is not aware at the zero-waste, water-neutral facility being built in China unless they're given the opportunity to learn about it or they're aggressive about learning about it. Bottom's up, top down and it has to be both to be effective.

[music]

**0:37:28 GB:** So number one is taking initiative to become literate in this. Number two, you're going to be dealing with this series of alternate constraints. Constraints you haven't had before and you're going to have to build that into your analysis of what's going on.

**0:37:46 KL:** Complicating our professional planning process.

**0:37:48 GB:** That's right. And, I think one of the biggest lessons we learned was the uncertainty that exists outside the company. The company that's going to succeed is going to deploy those risks and its knowledge through every single project they have. So if water scarcity is an issue no matter what project Coca-Cola invests in, they need to make certain that the project manager is aware of what those enterprise risks are.

**0:38:14 KL:** So it's driving down to real operational framework to the level where people would be planning projects. Project managers and program managers have a special seat in terms of executing against this.

**0:38:25 GB:** The project managers have come to a point where their work is crucial to the success of the company. It means that we have to take initiative that maybe it's not about waiting for something to come; the whole issue of ethics and values must be embraced by the project manager. If you're in the simplest form of project manager, gathering and manipulating assets to create value for some consumer or some customer, then it's incumbent upon you to determine is this a good thing to do? They have to learn how to be accountable. And they have to know that there's a variety of stakeholders looking at them starting with regulators. You have to be more aware.

[music]

**0:39:15 GB:** There's absolutely nothing project managers do that isn't about people. It is a people profession. You can take the assessment of emotional intelligence, you can take the LSI indicator, you can take Myers-Briggs. Self-awareness is the biggest thing. We go into a project team, especially a virtual project team, and you've got people who live in different parts of the world with different upbringings and cultures and then you've got the corporate values and I ask the same question, "How many of you at the beginning of a project spend one hour, just one hour talking about the team's perspective of values of the project and its relation to corporate values?" And

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misalignment of values may be something simple that causes conflict within the project team, which will slow the effectiveness of the project team. Somebody may say, "Well, that's not in a scope of a project manager." Well, if you're worrying about organizational survival, it is.

[music]

**0:40:17 KL:** So project managers need to take some serious initiative. It's up to us to be proactive in supporting forward thinking values and ethics and we must hold ourselves accountable for adhering to those standards. As we look to the future, it's apparent that organizations that take risks are the ones that will ultimately succeed. How can PMs support innovation? Listen on for some fascinating ideas.

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**0:40:50 KL:** 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 skill sets 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*.

**0:41:47 Michael Hannan:** This notion of how can we plan for predictable reliable innovation is key. And so in my earliest days when we go up to the White House and Congress at NASA and say, "We think this program to go to Mars is going to take 20 years and cost \$60 billion. It was 98% guesswork, 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.

**0:42:24 Oliver Schlake:** 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 in culture and attitudes. Just the innovation that takes place in my home country Germany compared to the US is a whole different ball game, how people approach that.

**0:42:55 KL:** So what are those key generic elements that frame the concept of an innovation in environment?

**0:43:00 OS:** 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

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engineering attitude, is evolutionary.

[music]

**0:43:38 OS:** We are looking at things and making them better, making them smoother. You'll hardly find German cars that are way overboard innovative. It's all there, but when you see it, it's done very nicely.

**0:43:54 KL:** Can there be such a thing as evolutionary innovation? What is the nature of innovation that we're actually talking about here?

**0:44:00 OS:** I think increment proof is an important part of innovation. 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 the 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 to say, "If we make this work reliably, we can actually make a business of it."

[music]

**0:44:34 KL:** What do you think about this from an evolution versus a revolutionary point of view? Can you plan for evolutionary?

**0:44:39 MH:** So they're finding more and more than 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 cross-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.

**0:45:30 OS:** 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. A 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."

**0:46:11 KL:** This sounds like the kind of guy you want for this kind of collision of ideas.

**0:46:13 OS:** Oh, he was right in there.

[music]

**0:46:21 MH:** I think the biggest mistake most R&D organizations make is they think that as long as

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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. 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 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 good ideas.

**0:47:17 OS:** You know where we can see this already in place for the last four billion years? That's nature.

**0:47:24 MH:** Nature. Yeah.

[laughter]

[overlapping conversation]

[laughter]

**0:47:25 OS:** We are just the... All of us here in the room, we are the surviving experiments of millions of our ancestors.

**0:47:38 MH:** But I would argue that as human beings, we can actually channel it. And 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. But 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 can, is something that we can build in our organizations that touches out to the broader networks that are out there.

[music]

**0:48:45 MH:** You know 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 going to be brilliant.

**0:49:01 OS:** Well, if you look then culturally, you need to have people who are also okay with that. Because if you are a...

[laughter]

**0:49:07 KL:** And a willingness?

**0:49:08 OS:** Yeah. Well, if you are a sophisticated R&D guy sitting in your lab, you got hired for



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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's the personal touch that comes in this. So you need to change back a little bit in the culture leadership area there. You need to change the attitude, that it's 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 network or may be the person who appreciates other ideas, or takes an idea that is half way and moves it forward to be utilized.

[music]

**0:49:54 OS:** 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 going to do then? We have to shelve them. You know, we invested in them. But instead, there are a lot of websites and models out there right now, the 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." So they're giving it to an open community and they say, "With the patent, you can use it. Make a product with that. We share the rewards for that."

**0:50:37 MH:** You know the car company Tesla, recently did that. Released all of its patents or almost all of its patents for public use and building this whole electric car movement beyond just its own closed R&D labs.

**0:50:49 OS:** Tesla is very smart in doing this because they know the corporate value for them creating a network and the movement towards the products they produce. It's more important than the preservation of their intellectual property.

[music]

**0:51:09 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.

**0:51:14 MH:** I'll take a simple example. Let's say I manage a small portfolio of software development projects. So I've got, I don't know, 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.

**0:51:35 KL:** Because that alone is not enough to define the innovative space here.

**0:51:40 MH:** Correct. But then there's still going to be this question of some subset of my projects is going to 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 might I characterize those innovations? Are they small, evolutionary ones? Do I get one big dramatic one per year that's more

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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]

**0:52:34 OS:** 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 it sounds. So the strategic group says, "We have \$20 million for R&D, right? That's what we want to invest. Give us some ideas." And magically, it's always \$20 million worth of ideas.

[chuckle]

**0:52:54 OS:** But here's a different approach. When we say, "Look. Tell us before we make the strategic decisions, what's in your pipeline? If we are considering even \$20 million of project for you guys, show me 10 times or three times more ideas and then we'll pair you up with the business person." So the strategy here comes in where you plan this, but we also want to 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 our tech. Come from the inside. And the choices that I've not used this week or this month or this year, we're not going to 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 be external to us."

[music]

**0:54:00 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?

**0:54:09 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.

**0:54:42 OS:** Those PMs have to get into the tumbler first.

**0:54:44 KL:** So the culture feeds this chaos leading into the sequential thinking to actually do the production if you will but the PM's got to be open to that.

**0:54:52 OS:** 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 because you don't understand what they're doing." So he backed them up, it's a classic model.

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**0:55:22 KL:** The *idea* may be the thing that fails, what we're hoping for still is 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.

**0:55:33 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 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 going to 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 to a project portfolio or any portfolio management.

**0:56:19 KL:** You need to keep risk at a higher level then.

**0:56:20 MH:** Yeah. So if I say, "Look, guys. I'm the PM, I'll own the issue." Just like the Skunk Work's guy said, "You don't bother my people, you talk to me."

[music]

**0:56:36 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?

**0:56:42 MH:** There's a bigger and bigger slice of the project management world that is going to be more heavily dependent on innovation.

**0:56:49 KL:** So what could they do?

**0:56:50 MH:** I need to have people on the team like the physicist that Oliver mentioned that might not be traditional thinkers, might not have grown up in this domain, might be more experimentation-oriented.

**0:57:00 OS:** 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... we're, missing the girls... but you have four guys there that have vastly different skill sets, 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 skill sets. So if you look at your own project management team, "Do you have that skill set there?" And then if you're not diverse enough, bring somebody even from outside, or bring the outside in, virtually.

**0:57:45 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 want to 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've got 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.

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**0:58:18 KL:** This was an inspirational wake-up call to the PM community. We can't just sit on our iron triangle. The value of experience cannot be overstated but you want to take that acquired knowledge and then move it forward. If we aren't keeping an eye towards the future, we will be left behind. Of course, the basics still apply: you have to do due diligence. Let the PM principle, supplemented by critical thinking, be your guide. Make sure the expectations of all the stakeholders align. Communicate with your team and your customers. Keep the organization's values and goals in mind and make sure your team is aware of them. To support innovation and experimentation, PMs have to be leaders in the true sense. Defend and if necessary, take the fall for your team. Special thanks to my guests Robert Brese, John Cable, Greg Balestrero, Oliver Schlake and Mike Hannan.

**0:59:06 S7:** Our theme music was composed by Molly Flannery, used with permission. Additional original music by Gary Fieldman, Rich Greenblatt, and Lionel Lyles. Post production performed at M Powered Strategies, and technical and web support provided by Potomac Management Resources.

**0:59:21 KL:** PMPs who have listened through this complete podcast may submit a PDU claim, one PDU in the Talent Triangle technical project management with the Project Management Institute's CCR system. Use provider code C046 the Washington DC chapter and the title "PM POV 0041 Looking Ahead". Visit our Facebook page, PM Point of View, to comment and to listen to more episodes. There, you will also find links to the transcripts of all of our productions. You can also leave a comment at [PMIWDC.org/contact](http://PMIWDC.org/contact) and, of course, you may contact me directly on LinkedIn. I'm your host, Kendall Lott and until next time, keep it in scope and get it done.

**1:00:00 S7:** This podcast is a Final Milestone Production distributed by PMIWDC.