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0:00:05.5 Announcer: 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.

0:00:09.0 Kendall Lott: Hey, hey, PMs. Coming at you from the Value Point of View today with co-host Mike Hannan and two returning guests Sergiy Potapov and Steven Devaux. We're laying out some methodologies that when combined, improve work definition, enhance value production, and allow you to adjust for the risk to value on your projects. We are elevating way out beyond the standard in WBS approach. And for the next few podcasts, you'll be hearing from our partnering sponsor, the UMD University of Maryland Project Management Center for Excellence, as they wind up for their 2023 symposium. Join PM professionals from all over the US to share project management knowledge and experiences. 50 speakers over two days in five tracks. Relevant topics, insightful speakers. Network, earn PDUs, and most importantly, learn something that you can take back to the office and implement right away. University of Maryland's annual project management symposium, April 20th and 21st, 2023.

0:01:16.5 KL: So, here we are, gentlemen. As we start off yet another one of our PM Point of View, looking at the big questions, elevating the conversation. And today's topic is Integrated Value Approach for Projects, 'cause it turns out there's so many ways to plan projects. And what I've learned is that no one may be the right answer, but there is a combination that we need to look at, and it's more than what we're often taught. So, Mike, you let us off with this kind of topic. Where are you calling in from, buddy?

0:01:47.2 Mike Hannan: Bethesda, Maryland, just outside of Washington, DC, enjoying unseasonably warm fall weather here.

0:01:53.8 KL: About to hit 80 on the weekend in November.

0:01:57.4 MH: And when I say unseasonably warm, I mean motorcycle weather.

0:02:02.5 KL: And we also have returning two other guests. One is Sergiy Potapov. This is round three for you, isn't it?

0:02:07.2 Sergiy Potapov: Yes.

0:02:07.6 KL: This has become yours. You know what happens after three? You become a co-host. Sergiy, I'm glad you have electricity and Wi-Fi and connectivity, 'cause I think you are not calling in from the US. Where are you calling in from, sir?

0:02:24.6 SP: So, I'm from Bucha, Kiev region, and something's good. It's quite warm outside because we still do not have heating in our buildings, but it's quite good right now.

0:02:36.6 KL: Are you feeling safe at the moment? You're good where you are right now?

0:02:39.9 SP: Yes. It's quite safe. Thank you.

0:02:42.8 KL: And then we have returning also, at least for the second time, if not the third time, Steve Devaux. Steve, calling in on the phone. You're our lifeline caller. How are you doing, Steve?

0:02:52.4 Steven Devaux: Hi, Kendall. I'm up here in Boston. It's a beautiful day. I'm supposed to get into the mid-70s this weekend, and everything's great.

0:03:00.7 KL: Excellent. Well, thank you for coming back and getting on with us again. That's really nice for you to do that, 'cause I've learned so much from your podcast from a couple years ago, or the episodes you did with us a few years ago. So, to our topic, the question that was thrown out in an earlier episode that had Mike scrambling, as I remember to pull these guys together, which is this real question about, are we planning well? And we know what the Pinbuckets told us about planning. And I think it boiled down to a couple questions, if you want to kick us off there, Mike, that got your juices flowing when you and Sergiy were talking.

0:03:34.2 MH: Yeah, yeah, sure. And so, a few things kind of all converged that I think is relevant to most people that are listening to this. One is the agile movement gaining steam over the last two decades. They never said we don't value planning. What they said was we value responding to change over following a static plan. Now, I've never seen a static plan in my career, but whatever they had for certain contexts, they had a point. Worse, I think in a lot of organizations, planning is so fraught with a lot of overhead, and it's so difficult to schedule to get everyone in the room at the same time, even if it's a virtual room now.

0:04:06.4 MH: And you know, we go through maybe multiple half day workshops, and we do WBS building and network building and task duration estimation or relative size estimation or whatever, maybe even break things in iterations and do some sprint planning after that. And in practice, I see so few organizations bothering to go through all that anymore. And so even with the consulting work I do with teams to say, hey, guys, I think part of your problem is you never identified the work at hand, and now you're surprised that you have all this rework or emerging work that you say nobody could have predicted. But when I pull you each aside independently, you all admit that, yes, we all could have predicted this. It was not totally groping in the dark for what the scope direction should be. It was a pretty straight line, at least 80% of it. And we're just bad at this, or we're good at it, but we don't see the point in doing it because it just is such a heavy lift, and there's always pressure to just get started. And so, I challenged myself a few years ago to come up with a better, faster way to at least scratch that itch of, is there a way to do some good, quick planning that still honors some of the discipline with things like sequential dependencies and how we coordinate the flow of work across multiple work streams and teams and all that to engineer the desired outcome that we all presumably want?

0:05:23.7 MH: And so, I stumbled across a method called product flow diagramming, which we can cover a bit today. And then I started thinking, how do we compare and contrast the different leading methods? There's certainly some benefit in good old fashioned WBS building and project network diagramming. And that's why I thought it'd be great to have Steve Devaux on because he innovated a way to actually infuse the value questions into those exercises to help us engineer maximum value from the get go, which I've always found really compelling. Then Sergiy mentioned that he's been reading up on some other methods that I'll let him introduce in just a few minutes. And maybe everyone listening can learn a few new tricks and maybe be better at addressing this planning question.

0:06:05.5 KL: Hey, so why don't you lay out some techniques to put on the table and talk about here. Tell us what is the product flow diagramming and then why you like those elements.

0:06:14.4 MH: It was trying to, without creating any unnecessary compromises or short circuiting any good practices, to find some way to scratch that itch of. Can't you make planning less painful and shorter and still useful? I don't know who invented it, it certainly wasn't me, but the notion was if you start with some of the similar questions that a good old fashioned WBS exercises asks, what does the end product look like? What are the business outcomes you're trying to achieve, etcetera? And then how do we break that down from there into the actual individual product components, subassemblies, and then also other work items beyond just the bridge you're building or the bicycle you're designing or whatever you're trying to do product wise. So, if we can ask questions like what must be true immediately before this objective is achieved? What are the necessary sufficient new realities that must be in place in order for the desired outcome to become real? And then taking that and say, okay, well, part of that is a product or a solution that we can see and touch like a bicycle maybe. Part of that is some of the other work that often, in my opinion, gets sort of left till the end of a WBS exercise, and it's often its own little cluster by itself, even when it says things like integration, which obviously requires integrating a lot of things from all the other subassemblies and breakdowns that WBSs give us.

0:07:35.2 MH: So, rather than deal with all the subassemblies and all that complexity, just deal with what must be in place, what milestones must have been met in order for this outcome to become real. And then in order for that milestone to be realized, what must have been in place to generate that new reality before that? So, as you build it, you're not only decomposing some things, you're also introducing precedents. Like, here are the things we have to do and in what order, and here's all the different work streams that have to be accomplished in parallel if we're all going to arrive at this desired outcome.

0:08:07.6 KL: This sounds a lot like what you had described to me around critical success factors and necessary conditions out of the theory of constraint environment. I don't remember which module that was, but it sounds like something that we've used, I've used with clients to break down strategy, not even at the project level.

0:08:21.1 MH: In fact, if you're a theory of constraints nerd like me, you might recognize that as a goal tree or some people call it a prerequisite tree. What are the prerequisites that have to be satisfied in order for the goal to be achieved?

0:08:33.9 MH: Other TOC people call it an intermediate objectives map. So, what are the intermediate objectives that must be met in order for the larger objective later to become real? All are kind of similar in my mind to the old fashioned WBS logic, is this necessary and is it sufficient? Then if we can say yes to both of those questions, then we can move on pretty quickly from there.

0:08:53.9 KL: But you're anchoring it in sequencing right at the get go, it sounds like?

0:09:00.0 MH: Yeah, but even there, like take something, I don't know, like planting a garden. If I say, well, I want this garden planted with all these vegetables and to generate these great results in harvest season, it's possible that I've done a lot of the work already. I've already curved out the bed, I've already maybe put out the rich composting top-soil, I might already have the seeds, and maybe

there's just one step, just go plant. I've actually seen some projects like that. In fact, I'm going to be facilitating a product flow diagram exercise right after this call and I told them to expect two two-hour sessions for a total of four hours and I think we'll be done. I suspect we'll be done within the first hour of the first session. I think they have a relatively straightforward plan.

0:09:38.8 KL: Is it the same experts in the room that you would normally have in a kickoff? Are we asking a different question of a different type of project management team?

0:09:47.5 MH: Well, you just touched upon one of the awesome side benefits that I hadn't even seen coming when I started doing this and that is when I started asking the core team, which usually is some sort of technical solution team, certainly in software it would be like that, but it could be bridge building or bicycle design or anything. You often forget that in order for the desired outcome to be achieved, we have to understand our target market. Well, we never got marketing in the room, right? Well, but they're not on the team. Well, yeah, but in order to achieve the desired outcome, we need them and they probably need... They'd probably prefer a heads up on some of the work that we need them to do in order for this to all go the way we want. So, it ended up just the question of who should be in the room.

0:10:29.4 MH: I would typically say, let's do a prep session that will tell us that and what the prep session is, the first 30 minutes of actually doing the PFD where they see from the top level, oh, we need governance experts, we need marketing experts, we need finance experts, we need, you know, etcetera, etcetera, right? And then we say, all right, time to stop. Let's make sure we invite all those people to the next one. We'd be foolish to go forward without them. And by the way, I think some WBS approaches, certainly you can ask those questions, but it's not always immediately obvious in my experience to the team building the WBS that they're supposed to ask those questions. They're more asking, how do we break this product down? And they're not always so savvy on what all the work actually needs to be. Steve, you had a comment on that?

0:11:13.8 SD: I'd have several comments. Let me start by a couple of observations. In my courses that I've been teaching now for about what, 35 years, on project management, I often start off by showing the famous triple constraint triangle of scope, time, and cost. And I ask which of these three is the most important. And the most common answer I get immediately is they are all equally important. And that answer, actually, I happen to think is wrong. And that's where I go next in my classes. And I point out that without the scope, you have no time. You have no cost. It's all about the scope. The scope is, if I can throw out a Latinate here, is the raison d'etre of, actually it's not Latinate, it's French, the reason for its existence. And the time and the cost are, yes, they're important. But the whole reason we're doing this project is to get that scope and to get the value of that scope. So why am I talking about this at the moment? Because that scope is absolutely the most important part of the project to develop, to plan. And right up front, whatever time we spend on planning the scope is absolutely essential.

0:12:46.1 SD: If you think about it. If we'd never put together a schedule and we never put together a budget, but all we had was the project scope detailed out into the activities, the deliverables and then the activities, in other words, a work breakdown structure or if you will, a product work breakdown structure, we would be way ahead of where most projects are when they start out. So, spending the time, getting that scope and getting it as right as we can is hugely important. If we can get 98% of the activities of the work we're going to wind up doing together, that is crucial. And for years, for decades literally, I've been saying questions that have been asked of people in surveys

taken, what is the biggest problem with projects? The one that I see most often, the hardest thing, the biggest problems are the scope gets done, the project gets done and it's still not giving us the value we expected. And that's number one. And number two is, it's so hard to figure out what that scope is. Yes, it's hard to figure out, but there is nothing more important. And in my humble opinion, if the PMBOK guide spent 40% or maybe even 50% of its space on work breakdown structures and planning the scope of the project, it would be hugely more valuable than it is.

0:14:26.8 SD: Unfortunately, the PMBOK guide basically throws in everything but the kitchen sink with very little indication of the things that are more and less important. So, people spend their times on stuff that is just not anywhere close to as important as the work breakdown structure.

0:14:48.2 KL: I want to jump in here, Steve, on a couple of things. I want to hold the value conversation off for just a second because I think that's deserving of your exposition a bit on that. I wanna challenge or ponder some of what you've said and get Sergiy's thought on this as well. The way you just said that threw me a bit for a loop as a consultant, which is I have recognized my own bias towards comprehensive approaches, which are really, really thoughtful and theoretically appropriate, except it means nothing ever gets done. So, my question is this. Can we actually know 98% of the work at the beginning? Now, having said that, I agree with you. More emphasis on knowing what you're actually doing and some of the other stuff we might want to spend less time on. So, I'm not challenging that. I'm just wondering, is it inherent in a process for you, Mike, that this is going to get all of the work that we need to know what's in front of us? I'm concerned with any process that says you really can't do it right unless you absolutely know pretty much everything. I'm not convinced. What's your experience, guys?

0:15:50.3 MH: So that's where I unknowingly have been making some trade-offs. I hope they're smart trade-offs. Talking to Steve the other day kind of clued me in on some of what I've given up, hopefully wisely. And that is, I'm not dealing with things like International Space Station or the next generation unmanned ground combat vehicle or something that requires enormous amounts of integrated engineering approaches with very big and complex products that have to be broken down before you understand the piece parts, all of which have to be executed. I'm dealing with things mostly where we never got together in a room with all the necessary people that own the different work streams, identified those work streams, understood how they could run in parallel, understood how we could coordinate across these work streams at a high-level understanding of the scope, and work the detailed scope elements later. So, what Steve reminded me of the other day was, well, when you push off the detailed scope elements till later, how do you know whether you're dealing with a mouse or an elephant? The high-level stuff might look fine on a piece of paper, but until you have the healthy conversations about the details, you're taking some risk there.

0:16:55.9 MH: And I think that's fair and appropriate, and now I just hope I can be more mindful of it. So, when I do see the need to address some big fuzzy area that calls for lots of breaking down, then I'll do it and not just trust the team to do it later.

0:17:09.1 KL: I'm feeling that you two are actually talking a little bit in a different role there than, again, completeness versus sufficiency and adaptation, your focus on sequence and flow. But maybe not, and I do want to get us to value, but first a quick reaction shot from you, Sergiy. What's your thought on this concept of what you heard from Steve really highlighting the need to try and understand all the work right at the beginning, and then Mike's own approach where he's kind of admitting that he might be missing some and he wants to make sure he grabs it, but he's willing to

see it to grab sequencing from a product flow. What's your take on what you're hearing here, sir?

0:17:41.7 SP: I totally agree with Steve that scope is much more important than time and budget. But another question, do we understand the scope from the very beginning of the project and have some differentiation for the types of project based on the complexity?

0:17:58.8 SP: So, I think that we have, for example, typical projects and we understand the scope quite good in the very beginning. We can have complex projects and maybe we understand what should be done, but we never know how to do it. And also, sometimes we have innovative projects when we cannot say what exactly should be done. In this case, for example, for typical projects, we know exactly what should be done, so we can describe the scope in the very beginning. And for innovative projects, it's quite obvious that we should use some iterative approaches, like some type of [0:18:47.8] ____. But again, another comment about the decomposition, like WBS or Goal 3 and the consequencing diagram, like PFD or network Diagram.

0:19:04.7 SP: So, I think we have to use both tools because when we use some tool to decompose deliverables into tasks, we can use the necessity approach so we can understand what must be done in the project. But I always see in my practice, in real life projects, when we can obtain sufficient criteria only when we will try to make logical consequence between tasks. So, necessity on the decomposition, but sufficiency only when we will try to create a product flow diagram or network diagram for our project.

0:19:53.4 SP: And I really like the approach that guys from oil and gas usually do. They call it drilling on paper. They have the composition for some new oil rig, but then they start to imagine what should be done in the future based on the logical sequence of different tasks. And only during this example, during this exercise, they can understand what types of risks they will see in the future during the execution of the project.

0:20:28.8 KL: Sergiy, what do they call it?

0:20:30.6 SP: Here in Ukraine, we call it like, drilling on paper.

0:20:34.0 MH: Oh, drilling on paper. We call that a tabletop exercise, I think, in the US.

0:20:39.5 KL: Yeah. Let's shift the conversation now, but let's imagine that we are beginning to identify the work in front of us and think of it in sequence. But I think the big question that Steve has always brought to us is the golden triangle, our search for value and techniques that start to lead us there. Steve, you want to lay some of this concept of, we got into the questions of understanding cost versus value, and that suddenly popped open a whole conversation. Do you want to talk to us about the value analysis side and understanding cost better?

0:21:04.7 SD: Absolutely. Can I just add one more thing in terms of the different types of projects?

0:21:09.7 KL: Please do.

0:21:14.3 SD: And what Sergiy said, I think, is absolutely on the money. There are very many different types of projects, and there are some where we have no idea whether we can ever accomplish it. And I just want to introduce a concept. It's called the wicked problem that some folks

here may be familiar with. The concept of the wicked problem was developed by C. West Churchman in the late 1960s. And the idea is, it's a problem where we don't know if there is any answer, okay? If there is anything that can solve it. And this is a topic that's being discussed in a lot of different places these days. I want to say that one of the things about a wicked problem is that one of the first things that should be done in dealing with it, as far as I'm concerned, is coming up with a plan for doing it, for accomplishing it. Yes, we may never get there, but ultimately, if we can't even come up for a deliverable, a product, a service, an output that can accomplish it, then it becomes not even a problem.

0:22:27.8 SD: It's just a worry out there. And the first task should always be to figure out how, whenever we have a problem, whether it's a simple problem like, building a house, a simple project, or a very complex problem, which involves a whole program of projects, and we're not sure which one will work. So, we have to go through a process of research and testing to see which problem, which one might accomplish our goal. That's where this planning and this work breakdown structure becomes even more valuable. And finally, on this topic, as we move on to the WBS, I just want to say that in terms of sort of falsifying, in a way, the argument about whether we should spend time planning a project or not? I would say this. Imagine what happens when we don't identify all the work on a project in a work breakdown structure. And we're never... It has been said, we're not going to identify at all.

0:23:32.2 SD: But if we think about what happens, even if we identify 98%, and I know it's hard to do that, especially as problems become wickeder, right? But as we go along, whatever we haven't identified comes back to bite us in the derrière, to get back to my French, in a very serious way. The stuff we forget means we have to do rework. It means we have to undo other things we were planning... Had already done, undo them, put this new work in, and then redo them. It means that our schedule goes way off, and now we have to find the resources to get it done. And our cost, our budget extends, it becomes much larger. So, the stuff we leave out really hurts us. And we should be trying very much to have as little of that stuff left out as possible.

0:24:35.3 SD: Now, going on to value. We understand that the work breakdown structure is a technique that has been used for a long time. And the work breakdown structure, hopefully at the lowest level, is where we develop our schedule. It's also where we plug in our resources. So ultimately, resources drive cost. So, the lowest level of our breakdown structure, which we might call the activity level, or if we want something slightly higher, the work package level, what we're talking about it is what ties scope, time, and cost, the three sides of the triangle together. But the one thing that we don't get into is the value. What is the reason we're doing this project? And within any project, we will have work that is mandatory. We're building a house; we are going to have to build a foundation. We're going to have to put on a roof. We're going to have to do several other things. We're going to have to put in at least one bathroom, and presumably one large room, combined bedroom living room, if it's a studio house, as it were.

0:25:50.8 SD: But then there are all kinds of other things that we put into our house to make it look good and to make it more functional. And the value breakdown structure takes each of these items, work packages, activities, and it estimates a value. How much would the project be worth if we left out any one of these? If we leave out the foundation, if we leave out the roof, essentially the project's value disappears. But for optional things, what is that second bedroom, that second bathroom, the balcony? How much is that adding to the value of our project? Because if we don't have time or don't have money, those are the things where we can trim the project. And we'd like to

trim it in a way which removes as little value from our overall project as possible.

0:26:51.1 SD: And finally, these activities are going to cost us money, and they're going to take time. If they are on the critical path, if you have optional activities on your critical path, they are delaying the end of the project. We would like to know how much are they delaying the end of the project by, number one, that is this concept called critical path drag, how much time is a critical path activity adding to the project duration? And secondly, the drag cost of that activity. If this activity on the critical path is delaying the end of our project by three weeks, it's adding, let us say, $50,000 of value to the project, but each of those three weeks is costing us $20,000. Then the cost of it, the drag cost of it is $60,000, the value it's adding is $50,000, and maybe the resource costs are just $10,000. It would make perfect sense to spend that $10,000 if this activity was being done off the critical path, 'cause it would be adding $50,000 of value. But if it's on the critical path, the drag cost is $60,000, the resource cost is another $10,000, it's $70,000, and it's only giving us $50,000 of value.

0:28:20.2 SD: We should not be doing that activity, at least, so that it's adding this time to the project. And projects are being done every day throughout the world that include work that is optional work that is adding less value than it's costing.

0:28:38.3 KL: You use that analysis at the beginning, or are you suggesting that this is a regular iteration that happens, or both?

0:28:44.5 SD: That analysis should be done right up front, right around the time that we're putting together the work breakdown structure and critical path schedule, etcetera. It should be a key part of that, because when we put together our initial schedule, if we have things on our critical path that are adding lots of time and they are optional, we should immediately be asking, and we should have some kind of quantification, what are the dollars it's adding in value, and what are the dollars it's costing through both resource costs and this drag cost of delaying the end of the project? But then finally, when we're doing the project, as Mike said earlier, things change. And what may happen is that an activity that made... An optional activity that had made perfect sense to do, when that activity was as it was planned, was going to be off the critical path, costing us $10,000 to give us $50,000 worth of additional resources.

0:29:48.1 SD: And now, as so often happens, it migrates to our critical path with drag of three weeks, each costing us $20,000. Suddenly, we have a net value added of minus $20,000 for this activity. We either have to jettison that activity or figure out a way to do it differently. But that never... And there should be some kind... Software packages should have some kind of warning alarm, a siren that goes off any time that an activity with negative value-added winds up in our project.

0:30:30.7 MH: So, this whole discussion, the most effective application I've found for it has been with Agile teams that are trying to come up with their most... Their minimum viable product. And the typical method they use is often called the MoSCoW method. And it's just the must-dos, should-dos, could-dos, and must-not-dos, or won't-dos is the W, right?

0:30:53.7 SD: Mm-hmm.

0:30:54.2 MH: And basically, you go through that exercise with a bunch of stakeholders. They're

going to respond in an emotional manner. And so, using your example of the value breakdown structure, the porch of your house is optional from a value point of view. If you don't do the porch, it doesn't destroy the value of the whole house. But if it's...

0:31:11.1 SD: Right.

0:31:11.6 MH: Grandma's porch and it reminds me of my childhood memories and it's really emotionally important to me, I'm going to tell you it's an absolute must, if I'm using the MoSCoW method. Absolute must. I don't want to debate it. I don't want to talk about it. It's a hard requirement. Just do it. But then later on, if suddenly there's a delay because of the artisan-carved materials on that porch that are crucial, because that's what grandma had, and we find out those artisans are in shorter supply than we imagined, and they're suddenly delaying my ability to move in and it's costing me $10,000 a month to live in a hotel, I might finally change my mind. And wouldn't it be better to just have that conversation earlier, like you described?

0:31:51.9 SD: And also, if I may say so, if that information is given by the project sponsor, whom I'm going to assume is the person who is paying for this project out of their own money or out of the money that they're responsible for in the corporation, then they can tell me. If they tell me how much this is worth and also how much time on the project is worth either finishing later or finishing earlier. If we finish out three weeks later, how much is that worth to them, then I can look as a project manager, as a member of a project team for ways to optimize that value in the best way from their point of view and also know that when that wire gets tripped, where now the value that's being added according to what they told me is negative, I come back to them and say, look, right now this thing's costing us $20,000 more than you said it was worth. And then they're still free, by the way, to say, Mmm, you know what?

0:32:58.2 MH: Do it any way.

[chuckle]

0:32:58.3 SD: I still want it. I still want it. [chuckle] I'm going to pay the extra. Fine. But at least now we're trying to tie both the project team and the customer, as it were, together in terms of working things out to the greatest value. And shouldn't that be what both sides want?

0:33:18.5 MH: Indeed. With the MoSCoW method, we had something like that porch, which was not a must-do, because it's not driving the whole value of the house, even though the person said it was must-do. It's a should-do that could turn into a must-not-do or won't-do. And so, that notion...

0:33:34.3 SD: Right.

0:33:37.2 MH: There's no room for that notion in the MoSCoW method. And if any of you Agilists out there have had the experience where you went through the MoSCoW method, you thought you did it right, you got the emotional intensity from your stakeholders, captured it the way you thought you should. And then at the 11th hour, when a really valuable date did have to be hit, and suddenly you went to mad scramble mode to toss out scope in a way that could protect the minimum value of that product. So much smarter to do all that in advance and avoid the mad scramble mode.

0:34:06.7 SD: In my classes, I do talk about the MoSCoW method and I developed the VBS for

what gets referred to as waterfall. But it was all... Has been interesting to me to see that the Agile approach actually has moved towards using the using the value breakdown structure, perhaps as an extension of the MoSCoW method, much more than waterfall is.

0:34:32.2 MH: I think the MoSCoW conversations do us more harm than good. I think the VBS conversations are a great way to get to minimum viable product.

0:34:39.9 KL: So, let me go to the next step here, because I want to move us along here. Steve, you described something that I think was worth recapturing again. And then I want to move to the next level of value, which is to look at it when you're facing risk and value. And that's going to take us over to Sergiy. But you really described the idea that we don't understand cost well. And I want you to hit that hammer or that nail really hard here for a second, because you talk about it as another way to understand critical path is when you talk drag and cost. So, we always think about the cost to execute the activities. And your challenge is to say no.

0:35:13.1 SD: What I talk about is the cost as being resource cost, budget, as it were, which is the cost of the resources. Yes, all weighted by overhead, direct overhead, indirect overhead and all the other good stuff that our accounting departments do. And they do a great job of that. But what is always being, in my humble opinion, forgotten on projects with a couple of exceptions, a couple of industries, nuclear power plants understand this concept very well, and also in oil and gas refineries, cost of time. What does it cost us on a project? What does the time of a project cost us? If we could get it done in five months instead of six months, or if it slips out to seven months, what is the loss of the value of that scope by being later or by being earlier? 'Cause that tells us how much we can expand in terms of resources in order to avoid taking on that cost. So, in a nuclear power plant in this country, it can be well over $2 million a day to do a project that calls for us to shut down the nuclear reactor. $2 million a day says, okay, you know, you can spend a lot of money on resources when we're talking about $2 million a day.

0:36:45.0 SD: And as a result, nuclear power plants in the United States, I can't speak about elsewhere, but in the United States do absolutely the best job of project scheduling. Their schedulers are wonderful people. I learned a lot from them back 20 years ago. Finally, one more thing I want to say is the cost of time is in dollars. As Ben Franklin said, time is a whole bunch of Benjamins. Now, I would add to that, time is sometimes human life. If we're doing a project in healthcare or pharmaceutical development or many, many other projects where we are working to save human lives, then the cost of time, the cost of critical past time or critical past drag can be measured in human lives.

0:37:38.8 KL: So, what's interesting here is that value that you don't get, economics calls opportunity cost. The value becomes a cost to you because you didn't take that opportunity.

0:37:49.4 SD: That's one way of looking at it, yes.

0:37:53.4 KL: Yep, it's just a different lens. So having said that...

0:37:55.4 SD: Right.

0:37:56.1 KL: We've now talked about different ways of understanding our flow, our breakdown to understand the work in front of us, what we should do, shouldn't do, some techniques we probably

shouldn't use, remembering to ask around value. And that takes us up to Sergiy listening in on this. He was like, yeah, but we have a different approach a little bit, because sometimes that value is at risk.

0:38:15.0 KL: It turns out he was looking at paper. So Sergiy begged to extend the model a little bit. Sergiy, tell us what you consider when you're thinking about this from a value perspective on project planning and design and execution.

0:38:27.4 SP: I really like this approach from Steve. It's quite clear. But for me, always it's very difficult not to calculate the cost or cost of delay of the project, but have to calculate the value. Have to calculate not the cost of porch close to your building, but have to calculate the value. And I think that is very important conversation because for us, all this cost benefit analysis is not always very, very clear, how to calculate the value part of this equation. Few years ago, I have found an article from Tyson Browning from the University of Texas with the name PVRO or Project Value Risks and Opportunities.

0:39:15.1 SP: And this approach tries to find the balance between the risks of not to achieve the needed failure and the fear of missing opportunities. And this approach helps us to define the overall value of the project, analyzing different value attributes. And from the mathematical point of view, we can think that these value attributes are independent variables. And we can analyze how different variables, how different value attributes impact on the overall value of the project. As an example, what could be this value attributes? I usually like to use at least two attributes are obvious, the budget or the cost of the project and the time. So estimated completion time for the project.

0:40:16.3 MH: Sergiy let me pause you right there. You're saying budget and time rather than looking at them as the other two legs of the triple constraint, you're looking at them as value attributes.

0:40:28.9 SP: Absolutely. The same approach as the cost of delay. So, if you know that you can increase the value if you will finish your project earlier or the value of your project will decrease dramatically when you miss some important date.

0:40:43.9 SP: So, nobody wants to buy a toolkit for the next day after Christmas. So, something like this. And again, the budget, for example, if you are already limiting in budget, in resources, no need to analyze the value of a nice three floor building if you do not have enough money for a small house in one floor. So, in every project, there is two legs, speed and cost, as a value attributes, we can analyze always. And then the very important part is to find another benefits or another attributes that impact on the overall value of your project. And usually, we can find here that I call it -TY words. So usually with this value attributes, we will use the words which ends with -TY letters like quality, usability, productivity, and so on, so on, so on. And then we can define the set of this value attributes influence on the overall value is highest. And then you can try to analyze what should be changed from the point of view of these different attributes and what should be your final scope for your project. So, this approach helps you to switch from understanding of outcome to the output and to define requirements for your deliverables and then follow through decomposition WBS and then create network diagram and then create, for example, gunshot and so on, so on, so on.

0:42:26.9 SP: So that's an idea. Try to calculate the overall value in the very beginning of the project using these value attributes.

0:42:38.6 KL: I wanted to ask you about that a couple of questions right there on that one. What you're describing, again, looking through a different lens, as I did a second ago, economics calls that sensitivity analysis. You're looking for which of those variables actually, if you move the needle, they would be worth more. And I think you're loading your project that way. Question I have for you is do you add up all those values to get an overall value statement? Are you looking at those at discrete periods? If we were using Mike's product flow points in time as we've hit critical success factors, would we be able to see where our value is accruing? That's one. And then two, I'd like you to think about then tell me about the risk question, because I think that's the next part is when we see value at risk. But anyway, how do you handle the value aggregation or summation?

0:43:25.1 SP: We analyze all these value attributes as independent variables, not for the special date, but for the logical finish of the project. So, when we will finish our project, when we achieve our objective, so then we will get some value. And this value we can analyze with this approach with independent value attributes. And again, one of the value attributes is the duration of the project. And we understand that the change in this duration will impact the value of the project. But that is not only one value attribute. We have another attributes. And that's an answer for the question number one. And the second question about risks, we can say that we have probability distribution to achieve some number in our value attributes. For example, usability. We understand that we will achieve at least 50 points of usability in our project, no less than 50. And then we understand that it is almost impossible to achieve more than 80 points of usability. That's the percent, just some numbers. And then we can say, okay, what is the risk that our final result, our final value will be so small that we will not achieve our critical success factors? We will not achieve our success criteria if our value attribute will be at point 50. And then it's a risk. And we can calculate the value, the overall value of risks.

0:45:15.4 SP: And from the other point of view, what is the probability that we will achieve 80 points of usability in our project? So usually, we will achieve 80 when we will not have some risks in our projects and when our resources will get the maximum from the project from their work. And then we can analyze this probability distribution and understand what is the minimum value in our project, what is the maximum available level of value in our project. And then we can find this needed value or expected value that we can plan to achieve.

0:46:00.3 MH: Yeah, I like that, Sergiy. When I was reading the Browning paper that you pointed me to, he basically pointed to three different levels of value. One is, he's the high jump example, right? The highest possible height I can realistically expect to jump if I get a personal record. And then the goal, what I can reasonably expect to achieve, even with some optimism, high enough to get a medal. And then the likely value, which he then says is sort of the minimum, below which you might maybe don't want to go after. And he just says, quite interesting.

0:46:32.7 MH: I don't know if I agree with this, but it's definitely giving me some pause, right? Making me think that the top level is what we'll call desired. And between that and the next level down, he calls the only thing that separates those is market risk. And then the difference between the middle tier, which he calls goal value, and the minimum called likely, he says that's the project risk. And so, what you talked about, Sergiy, was well, if we could one by one eliminate the risks, then we can get closer and closer to the highest personal record in the high jump.

0:46:58.7 SP: In real life, usually you will, from the point of your probability, you will be

somewhere in the area of goal or value.

0:47:08.4 KL: The part that's easier to address is project risk, which means we should be able to get from the minimum to our goal. That might be the measure of optimization. I don't know. I liked his chart there. I'm with you. I'm not sure it was the rest market, but I saw it as external versus internal. Stuff in my environment and stuff in the environment I'm creating has to be him. So, I thought that was an interesting structure.

0:47:28.6 KL: I do want to highlight for our listeners real quick as we go to close here, that paper that I thought was also very good, so thank you for sharing it, Sergiy, was Planning, Tracking, and Reducing a Complex Project's Value at Risk by Tyson R. Browning out of the Neely School of Business. So, people can look that up from February of 2018. It's a readable paper, and you can see the elements that we're talking about here. So, we've built up flow, better ways of seeing the project information in front of us, making sure we think about value, understanding value we don't grab as a cost, and then understanding some of that value can be at risk. That's what I got out of today. Or at least that's the logical flow I got out of it today. So, I have a question for you guys. I'll have two. I will give you one at a time. So, first of all, what did you learn in this discussion we had in scoping this conversation and having it today? What is a takeaway? Because I think all three of you are accomplished in your space, extremely accomplished. What are you taking from this crossbreeding?

0:48:25.2 SP: So, I really like this idea that the value and the risk for the project is really depending on the, what kind of task is on the critical path. Because it's really important, even if you are fully agile, it is very important to understand that still you have some critical path in your project, even if you don't like to call it. And in this situation, you will have this cost of delaying. It's very important to compare the expected value and the cost of delay if you will meet this situation.

0:49:07.5 KL: And you can find it on the Wikipedia page under value breakdown structure that was authored essentially by us, our own Stephen Devaux. Steve, what did you take away from this integration we had today and Monday in scoping this?

0:49:20.5 SD: First of all, I took away from it that scoping projects is hugely valuable. And I am getting the feeling that the work breakdown structure, which when I started out teaching project management back in 1988, for about eight years with most companies, I had to start with is explaining how to spell WBS because they didn't understand how to spell it. And then along came the first edition of the pinball guide, and suddenly things got hugely better in regard to WBS. And now I'm getting the feeling that we're moving away again from that for the last 10 years or so. The other thing I want to say is I love the idea of the -TY words, Sergiy, never thought of that durability, usability, all kinds. I have to... I'm going to go and make up a list of all those words, 'cause I think that's a really interesting way of looking at the value of a project.

0:50:19.6 KL: I want to be clear that we're doing podcastery here, just saying. Or podcastity. Podcastity. Mikey, what was your takeaway as a guy that was beginning to ponder having this as an episode back in July and August?

0:50:33.5 MH: Yeah, so just this notion that since my primary problems I'm trying to solve with the product flow diagramming exercise is how do we size this project reasonably well? How do we understand the different work streams that have to be co-managed and co-executed in a synchronized collaborative manner? And then especially when we are very due date sensitive, in

fact one, the same team I'm going to be helping today that failed to do this before, they hadn't met me yet, I don't think they were grounded in PM practices as much as their agile practices. It was a product that was targeted at college students. And if they didn't get it released before the fall semester started here in the US. It probably was not going to be worth doing a year later. So, in that case, they really were marching to a date, but they hadn't done all the scoping and planning. And all I was able to do for them late in the game there is only maybe a month or two before their target date, all I was able to do is say, stop all the other product development efforts you're doing, just focus on this one.

0:51:38.2 SD: And luckily that was enough for them. They delivered the scope they needed to, to drive value and hit the date, etcetera. But I was like, guys, do you ever want to go through that again? I expect that to work well for these guys. Watch out for me listening and learning to my two colleagues here is when I do come across things that are maybe a bit too high level to really feel confident that we've got our arms around the work, go lower level, break it down.

0:52:02.0 KL: Well with that, I'm going to leave it there. Steve, how can people get hold of you or follow you or find out what you're writing about now? Just keep checking the Wikipedia page, or you got something else for us.

0:52:13.3 SD: Wikipedia pages for Drag cost, for drag... Critical Paths Drag and DBS and also on LinkedIn. My name is Steven with a PH, Devaux, D-E-V-A-U-X. If anyone wants to link with me and ask any questions, I needless to say, I love talking about this stuff.

0:52:30.4 MH: And I got to throw something in now, super interesting about Steve for the years I've known him. So many of you in the US could probably tell that Steve is, he has a very, very well refined Boston accent, but he's actually from the Bahamas and so he speaks Bajan. And so, if you could ever get him to speak Bajan.

0:52:47.9 SD: Barbados, Barbados, Barbados.

0:52:49.0 MH: Oh, did I goof that? Barbadian, Bajan. I goofed it. Now I feel terrible. Yes.

0:52:55.3 SD: Not the Bahamas, it's Barbados.

0:52:58.4 MH: Barbadian and therefore he often refers himself as Steve the Bajan.

0:53:00.8 SD: That's right.

0:53:02.5 KL: Now I know where that comes from. Sergiy, we wish you the best of luck continued as you sit in a war zone. Is there a way for people to follow up with you? I assume you're still gonna be able to do some classes, which presumably are in Ukrainian, but are you posting anywhere on LinkedIn that people can follow?

0:53:17.0 SP: Yep. Sergiy Potapov, S-E-R-G-I-Y P-O-T-A-P-O-V. And I think we can put some links in the description of this episode of this podcast.

0:53:32.9 KL: Perfect. Shoot me what you need. I'll be adding an intro and outro. We just lost Mike 'cause Mike is off to execute what he just talked to us about. And I'll be getting on a plane to

do some of that at a strategic level with some clients starting next week again. So, thank you all, all of you again. And thank you gentlemen for your time yet again to be on a podcast episode. And I'll let you know when it gets released. Thanks again guys. And be safe.

0:53:56.7 SD: Thank you so much, Gandalf. Thanks, Sergiy. Bye bye.

0:54:01.1 SP: Thank you Steve. Bye.

0:54:03.1 KL: There you have it PMs. I have taken the concepts to the organizational level with clients myself in terms of the project selection. And I hope you can take some of these specific techniques to challenge your own thinking, improve your product design and delivery, all to enhance a better understanding of what should be the work in front of us on our projects. Look up project flow diagramming, PFD, value breakdown structure, VBS, and project value risk and opportunities, PVRO, with value at risk, BAR methods. Real techniques driving real value. Come here for all of your elevated PM conversations. And for PMs who've listened to this whole conversation, collect your PDU by going to PMI's PDU reporting center and select online or digital media and manually enter provider code number 4634 and select empowered strategies. And the name of the episode PMPOV0104, Integrated Value Planning and select ways of working in the new talent triangle.

0:55:05.1 KL: I am Kendall Lott, your host, thanking you for listening in and reminding you that as you try new techniques, get it to provide value and get it done.

0:55:18.2 Announcer: This has been a final milestone production sponsored by M Powered Strategies,