Project Management Forward
from the 2021 UMD Symposium
with Marcus Glowasz & Michael O'Connor

Michael O'Connor: Innovation being that piece that is really fuzzy, we don't know…So it's taking something way up front, in what I call the fuzzy front end and trying to put some more rigor or structure or strategy around it.

Marcus Glowasz: It's a movement. It's kind of a revolution, you can say, and it's something that definitely will not be done from one day to another, or just by buying the tool.

Kendall Lott: So this episode involves two presentations on what we've got to change. The discipline of project management and the role of project managers are constantly evolving, but our two guests are focused on *revolutionary*, not evolutionary adaptation. Both speak to what we count, what we should count, in an environment of innovation, as well as in how we should be. The call is for us to adapt and move forward.

In the third and last of our series from the 2021 University of Maryland Project Management Symposium, we delve into the lectures of two presenters: first Michael O'Connor on innovation, and then Marcus Glowasz on data. I also had a chance to chat with the director of the university's Project Management Center for Excellence, John Cable, to discuss this year's symposium and his vision for the future.

All in all, we hear from three guests. Project management can't be effective and also unchanging. We don't rehash methods of the past, but from here, Project Management Forward!

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 is your host, Kendall Lott.

Kendall Lott: If you bring up the subject of serious innovation, many project managers will actually recoil. We all get that innovation is a must, and I'm willing to bet that 90% of PMs believe *someone* should be doing it. The mere nature of it, and the behaviors surrounding the innovation process defy the basic tenets of project management. How can you put parameters around a project with no clear outcome? Your scope, budget, schedule… do you just thrown them out the window and mush on? Oh no. Listen on.

Michael O'Connor has some definite ideas and workable approaches for bringing rigor to what is essentially an amorphous process.

Michael O'Connor: My name is Michael O'Connor, I work for Medtronic. I'm in the corporate

science and technology area at operational headquarters in Minneapolis, Minnesota. My job is research director, director of strategy and project management, which means I basically run the R&D counsel.

KL (02:38): You're like the senior PM guy, the research director around project management at Medtronic. So this is medical devices, right?

MO: Correct.

KL: And the topic that you spoke to was "Innovation and Project Management: A Practitioner's Approach." So what made you want to present on this at the UMD symposium?

MO: Yeah, so I actually hadn't met Dr. Kerzner, and I bumped into him of all places in Dubai, at the Dubai International Project Management Forum, and we had a great discussion. We started talking about innovation, because he had worked at Medtronic before, a way, way, long time ago. And he says, "Hey, I'm writing a book on innovation project management," and I said, "Hey, that's where I'm interested in going, because I work in research and technology." So that's kind of how it started. I actually wrote a couple of pages in his book.

So I started looking at it more, and started working with people at Medtronic that said, "Hey, we need this title of 'Innovation Project Manager.' We're doing things that are pre... What we call pre-design free, so pre-start of a development project, that fuzzy front end, so to say. How do you get people that have the background and skills in project management, which we're calling innovation project management, to be able to run those things, do enough business analyst work, do enough technology work, get enough resources and people and pull things together. So that's kind of where it all started.

MO (04:00): So the topic for today is "Innovation Project Management: A Practitioner's Approach." You have the triple constraints: cost, scope, schedule. But Innovation Project Management is much more than that. It's change management, soft skills, etcetera. And I think it's something that, for those of you that have done innovation, you'll understand that innovation is a complex and messy, and it takes time. So bringing project management into it and trying to make it more predictable is a great thing for the business needs. So there's a large need for Technical and Innovation Project Managers to get things across the finish line.

Innovation planning: even early in the innovation process, you need to get to those market and customer needs. That could be really difficult, especially if it's a new market, or a disruptive market. So you've really got to get creative on how to get that information and figure out, "Why is this innovation going to be great for the company or organization?" And that takes a little bit of leg-work, and it's not always easy to do.

Under projects, there are many things to consider, you have the funding issue, strategic importance, and other things like resources and thoughts like Innovation Project Managers. You'll have a lot of unknown things like risks. Unknown things with commercialization and meeting the marketing piece of things, and even possibly the output of the service of the product. When you start the innovation, it may not be known what it's really going to be.

We have a product at Medtronic called Micra, that's the size of a pill, and it's a pace maker, and it

disrupted our own market, which we have over 50% share. That product probably took over 12 years, and they weren't really sure when they started off what that was going to look like. So that's a great example of innovation that changes along the way, that ultimately, it disrupted our leadership position in pacing.

Portfolio: so you need to have a balanced portfolio, and I'll talk a little bit more about this, but you should be looking at short-, medium-, and long-term innovation bets. And I think that's one of the things I'll also point out is, just on innovation and bets… I've been looking at a couple of books called "The Medici Effect" by Frans Johansson, and what he says is that you shouldn't just place a couple of bets, you should place a lot of bets, and then hopefully one or two of those bets move forward.

MO (06:28): You need a strong leader, and they need to have skills around that budgeting, scheduling, and scope. But that's just the traditional project management skills. You need to have other skills in the soft skills, change management, nowadays digitization, AI, and that type of thing. So we know things are changing quite quickly and the old skills of the project manager aren't always going to be the best skills for an Innovation Project Manager.

It's also the culture**,** so that the new norm is that…you know, the way I think of leadership and the way I think of innovation is, there's a company called 3M. Most of you are familiar with 3M. 3M, many, many years ago, probably 20 - 25 years ago, they figured out on how to create 10-15% of people's time to work on innovation. My company, Medtronic, we don't say it, but we do it, where people can innovate where they think they need to. But the reality is, even with 3M, when they carve out that 10 to 15%, they're usually doing that at night, and on weekends. So it doesn't sound as perfect as it is. Most people I talk to work their 40 hours and *then* they get their 10 or 15%. But the key is that leadership at the highest level said, "Innovation is important, so let's carve out that 10 to 15%."

KL (07:51): What is your main thesis?

MO: Yeah, so my claim is that innovation is a buzzword; I think innovation is something that we use quite heavily, and project management is another thing that we use heavily. But the intersection of those two things, I think are really unique, right? So project management being, you could say the leadership and the resources, schedule, those traditional kind of things, and then innovation being that piece that is really fuzzy, we don't know... We kind of know what we're doing, but we're not really sure. So it's trying to bring the intersection of those two things together and taking something way up front, in what I call the fuzzy front end, and trying to put some more rigor or structure or strategy around it, where typically, there's not that much of it.

KL: Why do we need that?

MO: I think we need to have the structure to be able to tell leadership that we're working on X amount of projects, let's say in research. And typically in research, they give them... They give them money and they give them lots of time. What we're trying to do at Medtronic is push the buttons a little more and put traditional rigor in there as to, you get...You need to tell us what the milestones are; you need to tell us how many resources you have. And there's going to be a limited amount of time, you're not going to have forever to figure this stuff out. So it's actually putting just more rigor around it than we've done in the past.

KL: I can feel people's souls curdling right now, though, with the idea of… now you've agreed to innovation, but I want milestones. What does it mean to put rigor into that? Don't you feel you're threatening something underneath the innovation?

MO: I think we are, but I think we need to. There's reasons for leadership to say, "Hey, you're working on Project X, what am I getting out of that? What's the ROI?" Now again, up in the front-end innovation, it's hard to determine ROI or markets always early on, right? And we need runway to be able to put technology out there that may be successful and it may not. But at the same time, leadership wants to know, "What am I getting for all this money that I'm putting into research and technology?" And it's not a science, right? You put milestones in there and they may hit, they may not. We may fail, we may be successful. But I think the point is, we're not going to do this for years and years and years and keep on hoping that things are going to get better. We're going to decide, "Okay, we'll keep this; we'll not keep this going. This may have failed. We'll try something new." I think it's really the option at the highest level to be able to make decisions quicker.

MO (10:28): So you need to find the metrics and the measure of business value and benefits realization that will work for your organization or company. I think this is really important if you're doing an innovation project. It's not just good enough to say, give me some money, give me some people, and I'll see how it plays out in a year. You really need to figure out what those metrics are. They don't have to be a lot of metrics, but if you can't measure it, leadership's going to look at it and say, "Why am I funding this?"

Then Strategic Opportunity. Innovation needs to be tied to strategic opportunity. So if you're doing that innovation and you can't tie it to strategy, that can be a problem. So I think having that link to the strategy…it doesn't have to be at the highest level, but maybe in your group or your organization, that's a very important item to keep in mind and keep in front of you as you go forward.

The sustainable consistent innovation cadence: So I think all I'm going to say there is you need to be able to stop innovation, if it's not important, just like any project. And we know how hard that can be when people are tied to it personally and professionally. So that's what I mean by that cadence.

Under the robust portfolio, again, that needs to be something that you can establish and be able to get to make those hard decisions and create that overall portfolio of the organization.

And then on the business model, you need to deliver value to your customers. So how are you going to build that model to show you're delivering value to your customers? Even on the front end or in the middle or at the end of it, so that's an important area also to keep in mind.

KL (12:07): An organization makes a decision that it needs a product or service produced because it has value…

MO: Right.

KL: That decision is made at an executive level or in some part of the organization to determine, "We need this thing because it has value." And project managers now need to see their world as

producing that asset. In our standard environment, the tools of project management are then applied that says, "Okay, if I give you these resources, are you going to give me that *thing* so that I can go and get value from it?" Right?

MO: Right.

KL: "On time, for what I gave you, and in the time that I need it." And there's a whole bunch of techniques for improving that, developing that properly, making sure you're tracking to what's really needed, making sure you didn't overspend the money. And so I'm just struck by one thing here then: it seems in the innovation space, it's one thing to say, "Is the innovation helpful to me?" That's equal to the decision to have this product that you're going to have value. The executives don't know what they're getting, so that's their first gamble.

But where I thought you were going, when I saw your presentation and even on hearing you speak, a project manager's almost not responsible for the inherent value of the product they produce at a certain level, although there's some debate there, if they're up and high enough on the chain. But they have to manage the fact that they're producing it. So my question do is this: Are you proposing that there could be something, as we have earned value management, for example, that there's earned value to innovation? In other words, are you innovating fast enough? Because to me, the problem isn't just what you finally produced, but are you getting anywhere along the way? Isn't that what drives people nuts? Not that they produced six things and we only found use for two of them, but rather, I don't know if you're ever producing anything innovative. I assumed that's what you were trying to get after by imposing the PM discipline on the process of innovation. Am I wrong?

MO: And we are. No, you're correct. I think… and this is new for us, so we don't have this... We don't have this playbook that's perfect, we've only been doing this for maybe two or three years.

KL: That's our thesis right now. Hey listeners, what we're saying here is, we're at the bleeding edge of how to look at project management innovation.

MO: Correct, absolutely. So what I've been working on at corporate science and technology is trying to figure out technologies that are maybe 10 years out. How do I put that project management rigor in with those innovations so I can show results on a quarterly basis or more to leadership? So for a technology project, it's fine for it to fail, but how do I show... "I've spent this much money. I did this much work. Here's what I learned, here's where I put it. Here's the lessons learned…"

MO (14:43): So we go through a couple of examples here. The first one's a technology project. And this is under the planning. We got leadership support for this and take in a lot of different forms over the idea of costs and resources. And we gained support through two key stakeholders, so that was important for us. And then we started to work on a concise plan and work on their criteria for success, of the different stakeholders. Once we did that, we had approval process, that was a series of multiple stakeholder meetings in groups, and we listened to their questions, and we basically did a innovation process, a lot like Agile. We iterate, iterate, then do a sprint, iterate. And that worked very well.

Under the execution, it was tough to do this for various reasons. We have a lot of things going on with change at the moment, but once we found the right resources, we were able to get that project moving and the resources, more technical resources so we were able to execute. And our results

were successfully… technology project, then transfer to Research & Development, which is a big deal at Medtronic. And not all these projects are successful, but this one was. And I would point to the biggest issue is that we had stakeholders involved, we talked to them and we kept them updated, and then we did the iteration process like Agile. And we did it quickly. So that's example number one.

Example number two is on an innovation project, and this was a grassroots project effort, so of a lot of things that we do at Medtronic, we're encouraged to work on, you can call them skunkworks or grassroots efforts. And this was a grassroots effort. Again, we needed to get executive buy-in, so we had one of those senior leaders that bought into this and it was done very well. And once we got that, we had cross-company participation, so we collaborated across the company and we found the right people. Again with 100,000 people that can be very difficult at times, but we were able to do it. The process was, again, we worked with the stakeholders, got executive buy-in. We had an elevator speech, and we rinsed and repeated. We didn't iterate as much as the earlier project, but we still did it here.

And then on the execution, this project was executed very well. Had a lot of communication. Had a lot of… marketing blitz and... We did very well. We got this across the finish line. So again, this was a really good example of how to pull a lot of things together. But like the last example, I think a lot of it came down to stakeholder buy-in and executive buy-in. Once we had that, we got the tools that we needed to move it forward.

KL (17:35): A lot of innovation fails, right? Or has no use once it's developed. But that's not the question the Project Manager in this context might have, which is: Did I spend the right amount of money for the right amount of time getting to failure? Like it could be a case where I have appropriately gotten to failure.

MO: Absolutely, yeah.

KL: Because you're talking about managing the process such that decisions can be made earlier, that decision-makers have information.

MO: Correct.

KL: So the project manager's job is to get to the end of the project, which may or may not be the production of the innovation that could be used.

MO: Absolutely. I think leadership has realized the work that we do so far out, that we have to learn from it. And failures are okay, but if you're not placing a lot of bets, in other words, you're not putting all your money in just a few things, you're putting them in a lot of things, and you're managing those properly to get those failures or get those successes… Because I think we all know, and the research points to… you know, you put a lot of bets into the funnel, you're only going to get a couple out. But you have to manage that and you have to manage that money, and you have to show that success and show that failure and report out to leadership. And good project management is the essence of getting that done, so not everyone's doing things differently.

KL (18:52): Let me go back to this management piece though, because the implication in there is that you have data and that you're using common data and that there's some way for you to handle

all this. You're alking about data itself to gauge market feasibility and understanding risk and what you're getting into. You're talking about being able to see the progress, even if it's progress to failure. But to know what's being spent and when and how, and whatever constitutes success or improvement. I have no idea how you would... I know how somebody could map through the kick-off meeting. They decompose the scope to understand the chunks. Or even in Agile, with sprints. How we're going to build against the scope. How do you build against an innovation layer? We're at 12%, 20% of innovation now? I'm not sure how you would do that, but it sounds like it's around data. Are you tracking that? Do you have a portfolio of innovation projects and you're able to see them as a portfolio and the use of resources across them?

MO: So I just started it in November, and we're still tweaking and working that, but the answer is yes. We're trying to get people trained and up to speed on how we're doing it, so it's still a bit of a kludge-y system at the moment. But we do have things as far as the milestones. We've got a proforma with resources and costs, we've got those standardization things, made just for our technology research type projects. So the answer is yes, but we haven't fully baked out and figured out what it looks like, how it's going to work. But we need to have quarterly meetings with Leadership starting in July, so we need to get this going and get it figured out.

KL (20:23): Somebody could say 60% of the code will be done at this point, and then we know the other project management things around quality and validation and all that, that has to happen, so I can say it's 60% complete. But I'm 42% complete on my innovation? I'm astounded how you could do that. It sounds like it's a tough row to hoe on that one, I've got to tell you.

MO: Yeah, it's a tough road, and I think it's a lot of communication with leadership, because nothing's going to be perfect, and this is very fuzzy. We're putting things more in the world of outcomes. You can work 50 hours a week, you can do all these things, spend all this money, but if you're not producing anything or getting any outcomes, you really aren't successful. And so outcomes is the more... Even on a resume or CV, I'm being asked to show the outcomes. Show the benefits. So I think outcomes is another way of looking at even the work we're doing. So what? What does it mean? What is the outcome for Medtronic? What is the outcome for people doing that work?

KL (21:24): Are we talking about ultimately creating a different type of PM, a different expertise in project management, which is a project manager of R&D projects? A project manager of innovation in any context? Do you think it's that different?

MO: I think it can be that much different to get the right skill set for someone to work in the front end of innovation, product development, research technology, is a different skill set than the typical product development. So the answer is yes, but at the same time, what does that skillset look like? Right? So you have the traditional triangle, the PMI, let's say. This goes well beyond that. I think you need to know like Myers-Briggs and the StrengthFinders. You need to know what kind of things or what kind of personalities those people are to see if they are a good fit. I think you need people with a lot more soft skills, a lot more EQ, people that are easily adaptable, not close-minded to change, I think people that can adapt and be flexible in pretty much any situation. Basically, I'm looking at Medtronic as people that are very deep in what they do, electrical engineers, mechanical engineers, chemical… they usually become project managers or core team leaders. We're trying to get away from that and get people that are multi-faceted, many skills. They have different experiences, they don't have to have necessarily an engineering background, but they have a need

for moving things along and innovating and having different experiences that makes up this, what we call the Innovation Project Manager. Because it is a lot of different skill sets coming into one job.

MO (23:07): That Innovation Project Manager area kind of straddles both the front end of innovation for us, for feasibility, and then advanced development, before it gets to pure development. When we get to pure development, we lock in and we start following the regulations then, so we're just kind of straddling that pure feasibility and advanced development, if that makes sense.

I would say that the project management in general, the cost, schedule, scope is changing into more of the soft skills and change management, no matter what you want to call it. I think the future of project management is change management, digitization, soft skills, and remote work. Those four areas I think are four key areas that are here. They're already changing. And then you have the AI ML, you know, data science… We could go on and on and on. But I think that future project managers are going to be needed even more and more, even though some people say robots are going to take over for them. It's pretty tough to do that, because project managers interface in a lot of different ways and work in a lot of different ways. But there's a lot of pieces to the project manager that are changing quickly, and I think it's important for people to understand where they're strong and where they're weak. It doesn't mean you have to change your weaknesses, but at least know those are your blind spots, and then maybe focus more on your strengths.

KL (24:30): As Michael said, innovation is complex and messy. Organizational support is essential, and innovation PMs need to bring a special set of skills and processes to the table. You heard that right. Not innovative PMs, but a new type. *Innovation* PMs. Don't panic, much of the normal PM work is still at play as innovation projects get underway. You have to make some of the basic assessments we always do: identify the potential value or benefit, understand it in the context of the overall strategy of the organization. Get that executive and stakeholder buy-in. Define success, which may include getting to the decision to stop faster. And so innovation project managers need to be able to blow the whistle and stop the operation if it becomes apparent that the original vision is unattainable or not worth the money or effort. And that means you have to start tracking data about your progress, not to a completed known Project, but to the kill switch or outcome that allows external validation of value, the innovation.

KL: Since 2014, the University of Maryland has been hosting a two-day intensive project management symposium with an ever increasing number of PMs tuning in to the ground breaking ideas and practical tips, knowledge into practice, put forth by dozens of presenters. For the past two years, due to the pandemic, the event has been virtual. But that only has brought more attendees from all over the world.

KL (26:05): John Cable, the Project Management Center's director, is back on call with us, kind enough to talk with me for a few minutes about the 2021 symposium: lessons learned and – it's all about PM Forward today – new directions.

KL: How did you feel about the symposium 2021?

John Cable: I was really happy with it, Kendall. We had really outstanding speakers at almost every level. This year I did personally a much more intense speaker evaluation. All speakers submit

their slides to me in advance, I review the slide deck for content and quality, and I give them very direct feedback about what I think. And it's all focused on content and the ability to communicate with our audience. So I'm putting personally many more hours into the advance, working with the speakers to help them really tune up what they're delivering. Almost all of the speakers respond positively. They're happy that somebody says, "Hey, you can improve this if you do that," or, "You've made a leap in your content... You've got a gap here. You better address that."

And I think it's paying. I think we're seeing it. We had a ton of speakers that people just loved, felt like they were really delivering content. And the reviews on all four of the featured speakers were outstanding. So I really felt like this year was the best year yet.

KL (27:49): You went virtual in 2020. You got to refine it in 2021. What do you think is one of the big values of having been virtual? Why does someone plug into this this year because of that?

JC: We all have the continual improvement gene in the way we approach things. And this year, number one, we had truly a global audience. We had people signing in from Europe, Asia, Australia. So it gives us a broader reach. And those people tell us, "If it was in person, we could not attend." So I think the really broader reach is an important attribute that we've learned.

The other thing that I think is really good is that because we're using the virtual format, we're recording everything, not just the featured speakers. All years, we recorded the featured speakers and posted those on the website for people to watch, at no cost. But we're now recording all sessions, and they're posted on the website. For a nominal fee, people can sign in and watch those any time.

So I think that's valuable on multiple levels. One is, it's a gigantic PDU-generator for the professionals that need to bone up on something and want to get credit for it. Secondly, it gives the people that participate in the actual event the opportunity to watch sessions that they wanted to, but had to make a choice. You know, "There's five tracks, and I really want to see these two, but okay, I'm going to go to this one…" They can go back now and watch the other one they wanted. So I look at those as really positive benefits.

JC: We're going to do 2022 virtually as well.

KL: There you go. I was going to ask you your last question. Tell me about 2022. Let's put the hook in.

JC: The one thing that everybody says they miss is the ability to have coffee with each other in the break times. And so we're looking at platforms where you can actually do that. We're hoping that for the 2022 event, we're going to have a break-out room that's always available, and people can meet there for coffee, and there'll be ways that they can identify and tag each other and go into small group discussions. So that people will have the opportunity to network and stand around and chew the fat with each other, and perhaps even go in and out of different conversations as they may like,

We're excited because one of the outcomes of the pandemic, as people have been thrust into this virtual world, is that now systems are starting to appear that didn't appear before. And the other thing that we're talking about, that is not for 2022, but we're asking ourselves the question, "Could

we ultimately do a hybrid event that is online and on campus simultaneously?" Now, I don't know if we can realistically do that because there are some technical obstacles to making that work in a seamless and comfortable way, but, because we've seen the value of the virtual event, we plan to continue that for the time being. And that doesn't mean we won't come back to having occasional campus events, but it does mean that for the next year or two, we're going to stay virtual and we're just going to try to improve the virtual experience for the participants to get the most out of it.

KL: It's continuous improvement. And continual improvement. You're living it. I mean, you literally live what we talk about as project managers. And I appreciate that because it has been better every time.

JC: Thank you very much.

KL: Once again, PMs, I urge you to visit their website to check out the presentations in their entirety.

KL (32:37): Project managers, people who need people… well, and maybe better data. My next guest, Marcus Glowasz believes that project management needs a serious overhaul, a revolutionary change. He is all for data: collecting, leveraging and analyzing and using the data to make informed decisions. But don't be afraid. You're part of an even larger call to leadership change. And the bots won't be replacing you yet.

Marcus Glowasz: So my name is Marcus Glowasz. I'm from Germany. I used to work as a project manager for technology projects. I worked mainly in financial services for many years, so I kind of started questioning a few things around project management. I have the usual certifications, like the PMP and Prince2, and I have the PgMP. I collected those, but I started researching more and more because I saw that there's a certain gap in project management, and I've seen it in my own projects. And I did some research, and I found out that something is missing, and data would be kind of the ingredient that we should make better use of to get actually the projects to a better state, or let's say the project performance, generally speaking.

That's not only something where I think, OK, we need some change like Agile or something, or some new framework or some new methodology. It's a movement. It's kind of a revolution, you can say. And it's something that definitely will not be done from one day to another, or just by buying a tool. Because many people actually ask me, "Is there a tool out there, or what tools could be used?" Etcetera. So forget about this, right? It's taking longer before you even think about tools. You need to actually change the mindset.

MG (34:41): Thank you for giving the opportunity to talk about... I think a very important topic, that is data, simply put, in the context of project management, and why, how this actually plays an increasingly important role in project management, in particular actually in decision-making. So it is, in the end, about transitioning to a data-informed decision-making and project delivery approach, with the ultimate goal to improve project outcomes.

I think most of us realize that the way we manage and deliver projects today, it needs adjustment. It needs to adapt to a digitalized world that we are obviously are living in, which is driven by new and advanced technologies, and also an overload of information that we produce and consume on a daily basis. We hear so much about data analytics, big data, machine learning, artificial intelligence,

and how it helps businesses to automate many processes, but also to gain valuable and otherwise insights from data to make decisions about product development, marketing strategies, etc. So there seems to be clearly an opportunity, I think, to leverage a similar approach for project management and related decision-making, especially because we are highly in need of a change in project management.

MG (36:23): Data helps to understand and improve business processes, you know, making them faster, more efficient, and reduce waste of money and time and resources. And eventually data helps us to make the right decisions, and also to make them faster. Just think about Google Maps or navigation systems in cars, or online shopping experiences. Now we get constantly flooded with information and that is made to make informed decisions.

Think about using an advanced navigation system in your car. Here data tells us all about where we are, where we're going, how fast we are going, any traffic jams that might be in front of us. And it makes recommendations on which route to take. And it also tells us when we will arrive at our destination, depending on which route we would take. So all this information for us to make a data-informed decision at the end. You're obviously in the driver's seat, and take insights from data to make decisions. So it's not data that drives the car. So you are still the ultimate decision-maker. Information and recommendations are prepared for you, for you to make the decision.

KL (37:49): Your key challenge that I saw that you put out in front of people is we need to move from data-driven to data-informed. What was it you were seeing that made you think that the concept of data-driven wasn't working?

MG: It's, in my view, it's conceptually, it's not wrong, but it transmits, especially in project management, it transmits a wrong message or kind of scares people away. Because a lot of people think like, "Yeah, okay, data." The next thing you think about is data analytics, and then you're already at artificial intelligence, and then people start thinking, "Oh, that's not going to work in project management, because this is a people business, and we cannot deal with robots." And this is kind of the association you get automatically, right?

And data-driven is, the proper definition, if you think about this, is actually really like data is taking or making decisions, right? So you automate a lot of stuff, which then obviously when you hear automation, you get very quickly to the association that we lose our jobs. As long as we deal with people, and there's obviously... People need to take decisions. And I try to show this in my presentation, with that navigation system. with that GPS system there, right?

So at some point, we will have self-driving cars for sure, and you probably just can be in back and just like, somebody just does the driving job for you, right? But we're not there yet. So as of now, it will not work. So you need someone actually to monitor, I need to actually interfere and just take recommendations. So it needs to be kind of the hybrid intelligence, that's also something that...there's a lot of research around this. And that, I think is the model that needs to be followed in project management, to really make sense of it.

MG (39:55): So right now, let's map this to the concept of project management. So this is a new approach, it requires a fundamental change in mindset, as it requires to find the right balance between trusting in what data information concludes for us and recommends, and also our own human judgement to ultimately get the confidence to really make the right decisions. And, as

project managers, we make decisions all the time, which makes our role in the project very critical. So decisions like what meetings, when they should fall within the project team, that's obviously more simple. Or our communication channels in general, where we store our project artifacts, what type of methodology we should use – Agile or waterfall – based on the type of project, we decide on suitable delivery methods. Then how we evaluate risks, issues, etcetera. We negotiate with stakeholders, coming to agreements and decisions. So it's all about decision-making in the end.

And a data-informed approach to decision-making will help us to significantly improve the quality of our decisions. Especially because now we like to think of ourselves as rational decision-makers, carefully making choices based on data, logic, evaluating pros and cons, etcetera, The truth, however is that we are horrible at planning. So we are often driven by rather wishful thinking, rather than rationality. We are driven by biases, cognitive biases. We think way too optimistic in many, many ways.

So we need to become data-informed to get our own biased thinking kind of under control.

KL (42:03): You framed up that we like to think of it as being rational though, even though it's a people discipline, or a people's science. And you flagged, well, but we have hidden biases. So in fact, we're not overly rational or not as rational as we might think when we're doing this. If we're using data, but we're still saying that our intuition matters, are we still calling out that our biases are still going to be relevant in how we're perceiving the information we're getting?

MG: That's why I'm saying we need kind of the mix. We need to reduce it. It's not like we're saying, "Let's get data analytics and data into projects and we remove any bias, remove any uncertainty of a project." It's simply not possible. We obviously manage risks, etcetera, in projects, and we make forecasts that we always did, right? But then we have this huge uncertainty, which basically leads to this increasing amount of project failures. So the goal is goal to reduce uncertainty, not to eliminate.

KL: You're right now saying that it's about taking data and blending it properly with our intuition while trying to reduce biases. What is underlying your shift to data-informed decision-making as you lay it out?

MG: Why do projects fail? Because we make wrong decisions? And why do we make wrong decisions? We have to find the root cause. So the root cause is actually, it's cognitive biases, which we have, it's the increasing amount of data – and we need data and information in decision-making.

When we take decisions, we usually... First, we look at the problem. How do we actually identify the problem? We look at certain information. Are we actually framing the problem correctly? Are we asking the right question? Is that actually what we're looking for? What is the goal of the decision-making process? So we need information, right? And there, we kick already in with this limitation because we cannot even read all that amount of information. So you get really just a snippet, and look at just a sample of the whole population, and think, "Okay, we found here something which actually we have to take forward for decision-making, which basically identifies our problem.

And then if you go step by step through this, when we analyze...and first of all, we have our only limited information. Then the cognitive biases come in, right? Because then I look, maybe it's

something different than you are, and I make some different interpretations, based on bias.

And then I can go on and on with many examples. Like confirmation bias often is, we look at data just to confirm our own ideas. I'm not excluding myself, it happens many times to me, right? When I go through decision-making processes, where I want something in some steering committee or somewhere. I want to have something decided, and I want that way to go, because I know this is the right way and that makes sense to me, and I feel more comfortable with that.

So I try to steer it in a certain direction. So I take the data and information and basically build out the entire decision-making process a way that it leads all to this decision.

MG (45:24): And so as big data gets bigger and bigger, it also becomes much harder for employees to extract truly relevant, also timely insights from data. So what needs to get done is to really separate the signal from the noise. And with more data, there is actually a need to look at data more frequently, more often. So it becomes a challenge, which we are not really able to handle anymore because of this massive about data and information and the frequency that information is changing, and the message is changing. And in project management, where we rely on data information to make informed decisions on a daily basis, we are losing actually our ability to make acutally good decisions.

KL (46:20): You highlight, more data is not always the answer, it just means more noise. So there's a trap in there, in fact, if they're like, "Great guys, we've been scraping all this data for you, there it is. Why isn't your program improving? Why isn't your project improving?"

MG: So PMOs need to become more a transformation body, let's say it, so it's actually leading the whole initiative, basically the link to the upper management, to actually sell this whole case and making sure that it's being basically followed up. And then also helping to coordinate this whole movement, this whole initiative.

Centralizing data assets, for example, there needs to be somewhere all the data is being stored and reviewed, etcetera. Data strategy. It needs to be centralized. And that's where I see kind of the PMO at least to a certain degree in the lead.

KL: There's a level of, I would call it the PMOs, you just talked about it, it needs to see itself as transformational, more helpful, essentially. I'm thinking of the word curation here. It needs to curate the data for us. It needs to provide information, knowledge out of that collected data back to us. That's where the organization owns the strategy of making it available and correct and informative?

MG: Yes. And you also touch on the point: somebody needs to actually look at this, and making sure that…remove the noise and get out the signal, there. And there will be new roles, and there will be a shift basically. And I see this kind of project management roles, there will be still a project manager, but I think it will shift more to a more product-focused role, especially when AI, etcetera, comes in, right? There will be certainly a certain degree of automation, more for administrative tasks, I would say, like project status reports and stuff like this, right? And collection of data, obviously as well. And the other thing is to look at data, this is kind of what I would usually call like a project data analyst, but something like this. I see this coming as a new role in the project management space to actually, yeah, as you said, curate the data.

MG (48:52): To retrieve real insight from data for a decision to be made, we need to transform data into information, and ultimately also knowledge. So data, facts and figures alone, they may not make sense to anyone. So as part of the first step, which is the problem statement and the collection of related data, we need to ask questions. We need to clearly articulate what the problem is, and ask the right questions to collect actual relevant data for our analysis. And what the analysis does is to transform data into information, which will give more context in relation to the problem at hand.

So let's say we are elaborating the project schedule for a software development project, and we need to estimate a critical project task, and for this purpose are collecting data on task duration from similar tasks in previous projects. So we may collect the task estimate of "Three." That number alone is obviously meaningless. But once we attach a unit to it, such as hours, days, story points, and maybe also get a view on the seniority level of the team or person who carries out the task, then this gives the data meaning and provides information.

And with more collected data like this, we can identify patterns, similarities, trends, outliers, or any special classes to get a meaningful data. And that will enable us to identify possible solutions. Let's say we may want to allocate one developer with the most experience for such a task, and has the knowledge. But another developer who is not that senior, but also would be able to do the job. So we identify various options that could be feasible, and we produce actually knowledge by comparing and understanding the information and resulting options.

So this will generate insights, which option might be a more suitable option. And analytics support you by identifying meaningful patterns in the data. It could tell us that Developer B might be the better option, maybe, because of his or her past performance, or because of any current project schedule constraints.

KL (51:13): Maybe the only thing worse than not having any data is you just have it on your own. You have the mindset, but you can't get anywhere. So you've got to have it consolidated. You need it across the organization. You need the PMO to step up and get the data, right?

MG: So if you think about project management, what are we producing? We're producing project schedules, we're producing stakeholder plans and communication plans and financial plans, etc. This is all data. And what are we going to do with that? So we take it through the project. And if you understand the levels of data to information to knowledge, and then wisdom is the ultimate level, we usually take it to a knowledge level from data. So we take data, we make sense out of it, we produce all these plans, we shift it to information and knowledge and have that basically to drive our project.

And what are you going to do with that once a project is over? Either destroy it or it ends up on some SharePoint in Nirvana, right? So it's nowhere used ever. So basically what we're doing, we do all this effort to lift that data to information and knowledge, and then we throw just all the way back. So I refer to this as dark data, because it's effectively dark data which sits on company infrastructure and is having no value anymore, because we simply don't use it anymore. We could re-use it, you could recycle it and take value out of this, right? So this is what we need to do in project management, we have to actually recycle the data instead of just throwing it away.

MG (53:04): We need to leverage data to extract relevant insight for a truly informed decision-making approach. So we with the clearly identified and articulated problem or request for decision,

we need to collect the necessary data that relates to the identified problem. So this could be linked to stored project records or lessons learned. You know, if such problems in have occurred already in the past and, if yes, now how was it resolved? What solution was applied? Even if the problem did not occur in the past, finding similar problems and leveraging that data could provide a certain degree of insight.

So what methods do we need to take to transition to such a data-informed approach for decision-making in projects? So if we look again at the interplay between the different critical items, there is an intersection between process and data that needs to be defined with diligence to ensure we capture the maximum value of data. And this includes critical items like data quality, or where do we get the data from? Which systems are we using? Data privacy topics play also a role.

So all these questions are part of a data strategy that needs to be defined in the project management space. So it's kind of enabling the data from the technology point of view. On the other hand, processes need to be combined with a shift in the mindset or behavior of project professionals. So it is kind of enabling the data from a behavioral or cultural point of view.

MG (54:46): To get value from data, it is clearly not enough to leverage technology alone, right? It is clearly not enough to introduce data technology, some fancy algorithms, you know, hiring some data scientists, if you will, and then saying that this makes us data-informed. That needs to be supported by project staff and decision-makers through data awareness, data literacy and to process diligence and a certain discipline.

And in the context of making data useful for the project management practice, we need to revisit existing processes. And we need to adjust them, and actually link them to behavioral aspect that require a higher discipline and diligence. And that's where actually where data culture comes into the picture, something that supports the data-related work. So it means that there needs to be data awareness, as I said. In other words, data and its value need to be... They need to be appreciated within the organization.

Everyone involved, especially in decision-making processes, needs to understand how data contributes to the decision making, so that there's a common understanding and also engagement from all players. Then there needs to be data literacy, and that means the ability to read, write, and comprehend data. It is like a new language to be learned.

KL (56:17): You talked about a mindset, but you have to be within an organization that has this mindset, so you even flag in your presentation, I invite listeners to listen to it, on culture. So a PM can't really struggle with this themselves, right? Because I would imagine some level of comparison of these project level bits of data matter, right? Somebody has to somehow bring value to that. But you have to find an organization that appreciates that and has a structure around you for that.

Our problem with getting better data usage at the PM level so that they're not freaking out and thinking that it's all automation is, in fact, that the organizations have to get straight first. How much is this a call a to leadership more than the PMs?

MG: You're obviously right, that it cannot be just, like someone looks maybe at that presentation right now, "Okay, I go back tomorrow to my project, and I implement this." So it needs more than that. So it needs to be basically a top-down approach from the top of the organization to basically

have that entire project management space at least distributed and implemented. Because that's the essence, right? You need data. Where is the data coming from? If you're doing your projects and you produce data and you take care of your data, then there's not much use of it because it's your own data, right? So maybe even at the department, that's not maybe of really much use. So it's really making... Start making use when you actually have the entire organization working on this and basically producing data and centralizing data or your data assets basically, so everybody can use it. So we need some real leadership around this.

KL: Real data, not dark data, well-used means getting it into decision-making. We spend overhead to collect the wrong stuff, and the good news is we rarely go back and reflect on any of it. Glowasz has made the case that the cost of good data, well used, saves you time and resources. But organizations need to be committed. Think systematized, think PMO, think curation.

Project management needs must move forward and so must project managers. The good news is you remain essential. The robot will not replace you, at least not for a long time. Data and AI served to provide you with information and analysis so that you, PMs, can make a good decision. Remember, it's data-*informed*, not data-*driven*. For PMs to advance, though we must swim in friendly waters with an organizational culture that supports the new paradigms, encourages innovation and promotes the collection and use of meaningful data.

I highly recommend that you check out the University of Maryland website at https://pmsymposium.umd.edu/pm2021/. For $150, you can register and view, at your leisure, the complete sessions plus keynote speeches and earn PDUs.

Special thanks to my guests, Michael O'Connor, Marcus Glowasz, and as always, Mr. John Cable.

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And as always, I'm your host Kendall Lott. Keep looking to the future, and get it done

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