

Medical Device Manufacturers- A Need for Speed and a Roadmap to Sustainable Innovation

- Joe Hage: Hello everyone, this is Joe Hage. I have the privilege of leading the Medical Devices Group on LinkedIn, and today I have the privilege of introducing Maureen Carlson from Appleseed Partners and Carrie Nauyalis. Oh, I did so well when I pronounced it before. Say it first properly?
- Carrie Nauyalis: Sure, it's Nauyalis.
- Joe Hage: Nauyalis, I knew that. I'm sorry.
- Carrie Nauyalis: [Laughs] It's okay.
- Joe Hage: From Planview, and they are going to take us through a roadmap for medical device manufacturers. And what I love about this presentation is it was built with the folks on this call's help. We had 91 responses from members of the Medical Devices Group to help shape the results, which we will now hear. So ladies please take it away, and I will put myself on mute.
- Carrie Nauyalis: Excellent. Thanks so much, Joe. Hello everyone, this is Carrie Nauyalis. Just wanted to thank you all for joining us. We're coming to you live from Austin, Texas here in the Planview studio and we're just delighted to have you join us to show this amazing research. I want to introduce my friend, Maureen Carlson, who is our chief researcher. Maureen, you want to talk about your experience at Appleseed and what you do as part of this research?
- Maureen Carlson: Absolutely. Hello everyone, whether you're in the morning or the evening. I think everyone's evening now. But I'm really thrilled to be here. It's one of my first times presenting on this brand new research, and Appleseed Partners does marketing, consulting and a lot of research over the past several years with Planview around product development. So this is our fourth time surveying on this particular topic and we have a lot to cover today. So go ahead and we'll talk a little bit about the agenda.
- We'll cover about the study. I'm going to give you some background on the methodology and how many we talk to around the globe. We'll also talk about something Carrie's super-excited about, the new Innovation Management Maturity Model and how that informed our study this year as a brand new addition to the research.

We'll talk about the current state and trends that we've learned about and how they affect the medical device community, and then importantly the desired future state of things. What's the end goal? Where do people want to be on innovation management maturity, which is really interesting, and how do they get there? We found that there are four core missing elements right now for a lot of organizations to get where they really want to be, and so Carrie's got some excellent recommendations and next steps that we've developed together, and I think we have a lot to cover so we'll hop right on in.

So let me give you a little bit of background on this study. This is the fourth time that Appleseed Partners and OpenSky Research have conducted the research since 2009, and that means we have a lot of great trending information on how the pain points and risks that product development organizations have evolved since that time right up until September of 2013 when we closed the study. Without a doubt, product development leaders are very concerned about having too many projects for their resources—you're probably nodding your head up and down—and the pressure has been mounting to deliver faster innovation.

Our approach to the study was to conduct in-depth qualitative phone interviews that helped us form a quantitative online survey with statistically valid samples. Overall, we had more than 500 participants from across the globe and various industries, and this year we had 91 or nearly 100 medical device product development leaders participate in the online survey. So today we'll focus really on that community, although we'll make some comparisons to the total sample, and I know you're going to find this really interesting to see how your peers are doing on product portfolio management.

Carrie Nauyalis: And to that point, thank you guys. If you were one of the folks who responded to the survey, we love the survey. We love the research and the stories and best practices that it tells. So thank you if you participated as part of the survey. If you didn't, there will be another opportunity in about 18 months, so... [Laughs]

Maureen Carlson: Yeah, we're already starting to plan and plan away.

Carrie Nauyalis: Indeed.

Maureen Carlson: Really when we started this study we said, "Let's take a step back. What do we want to learn this year?" And in fact I asked several product leaders and stakeholders including Carrie...

Carrie Nauyalis: [Laughs]

Maureen Carlson: ...who's deep in this area, "What do you want to learn this year from the study? What do you want to understand about the trends we are seeing in product portfolio management?"

Carrie Nauyalis: And as the solution evangelist here at Planview it is really my job to be a thought leader in the face, and when Maureen asked that question I really had to stop and take a step back and say, "What do I want to know?" And we have these core trend questions around business and risks and pain points and productivity and the commercialization process and tools, but I really couldn't articulate, "Well, what are the best companies doing and what are the lower-maturity companies doing so that we can kind of provide a roadmap for folks on how to get better and to suffer from less of those pain points and the business risks?"

You know, if you take a look at the research from Stage-Gate International, from Dr. Bob and Dr. Scott, really being able when they show their research about the success of products in the industry and the launch of products and projects, project execution, they always do it on a comparison of the best companies versus the worst companies. And nobody wants to be in that worst company kind of bracket, but also we kind of took away that connotation of the good and bad and just made it a maturity model and not necessarily everybody needs to be at that top maturity. But I wanted to understand these trend questions in context of a maturity model.

Maureen Carlson: Yeah, and I decided it was the ideal time to add this aspect to the research, and as a result this year we have a whole new dimension to share in how it affects trends and opportunities. So I think you'll find that today.

So in order to add the innovation maturity dimension, we added three new elements this year to have participants rank themselves in these core areas of innovation management maturity. One was from a people perspective, second is processes, and the third is tools. Carrie, could you explain a little bit more about these three as they relate to innovation management?

Carrie Nauyalis: Yeah. When we talk about innovation, when we talk about portfolio management, when we talk about product development, we often use the phrase "people, processes, and tools." So really thinking about that perspective, that's the image that really came to mind around this Innovation Management Maturity Model, and really being able, if you think about it as three legs of a stool, that's what your innovation program

is sitting on. It's sitting on people. And when I talk about people, I'm not talking about the engineers and the resources who are doing the actual product development. I'm talking about the structure around that. Organizationally, how are you driving innovation? Is innovation everybody's job, which I would submit it means that it's nobody's job potentially, or is there a core group that's focused on it or are several people tasked with that? Is there some kind of a center of excellence to manage really the other two legs of the stool, managing the processes, making sure that they're repeatable whether it's a phase gate, a stage gate, whatever you might call that gated process, your commercialization process? Is it automated? Is it repeatable? Does it cover all the way from ideation through to launch and through to sunset or does it stop at launch? So really kind of surveying on that perspective.

And when it comes to tools, it's really about purpose-built, best-of-read applications, software, and that type of tool to really speed innovation, and it's about integrating those tools to other systems across the company. So really having those three perspectives and those three legs of the innovation management stool to come into play.

Maureen Carlson: Great. Thanks, Carrie. So we wanted to delve in first to the current state. Where do they see themselves on these three legs of the stool? How are they ranked? And first let's take a look – this is the Innovation Management Maturity Model that was used for participants to rank their organizations. So obviously this is a serious eye chart here. You're squinting and trying to focus in.

Carrie Nauyalis: [Laughs]

Maureen Carlson: You can get the full version in the research report. But what's most important at this point is to understand that we use a five-tier grading scale, and at level 1 is that lower level of maturity, the lowest level, and level 5 is the highest level of maturity. Across the top you see strategy, people, processes, and tools, but you don't really need this to rank yourself, right, Carrie?

Carrie Nauyalis: [Laughs] No. You know, I've been talking about this Innovation Management Maturity Model since we developed it back in June. Maureen and I were skyping back and forth really taking all the information we'd learn from others and consulting with some experts in the industry to make sure that we got it right. But in presenting this information around the world, I really found that I didn't need those

descriptions. Give people a scale and people can rank themselves on not only where are they today as it relates to people, process and tools. But also, where do they think they need to get to on that same scale?

Maureen Carlson: Exactly. So let's look at how medical device participants ranked their companies on these three core areas. From a people perspective, you see here that more than 40% ranked a lower-level 1 or 2, about 30% are a level 3, 13% are a level 4, and about 10% have reached the highest level of maturity. Those are the companies that have developed center of excellence and have the roles and functions in place to drive faster innovation into their product portfolio. Did you want to comment on that, Carrie?

Carrie Nauyalis: Sure. I think this one is a little bit different, and we're not going to do a comparison between medical device industry and the larger population including CPG technology and heavy manufacturing, but in this case this one's surprising a little bit in that the med device companies reported to be a little lower on the maturity scale as it relates to people in that—and you can go to the full report to be able to access that and do your own comparison, and we definitely encourage that—the people side surprised me a little bit because I think that having that framework and that organizational structure, you guys are delivering life-saving products and really enhancing people's lives as they're dealing with medical issues to really be able to drive innovation in that space.

So it was surprising to me a little bit that the maturity was a little bit less than average on the people side. So you may not have the organizational structure, but that's something that is certainly implementable if you think you need to get there. And to that point I want to make this comment in context on all of these levels: Level 5 may not be your end goal for all of these things. You need to decide for yourself as a company, for your brand, for your particular product line what needs to be your level of maturity. Maybe you don't need a center of excellence to manage the process and tools and the strategies and the people behind all of that innovation and growth but maybe you do. Only you can decide, so we're just kind of reporting on this as a framework.

Maureen Carlson: Right. Let's move on to process now.

Carrie Nauyalis: Okay.

Maureen Carlson: Here we look at the same data from a process maturity perspective. More organizations have moved up to level 3 here in terms of process, but fewer

have reached level 4 and 5 in this area, and still about 40% are at level 1 and 2. What do you say, Carrie, should we move on to tools or you want to talk about this? Oh, you were going to talk about regulatory...

Carrie Nauyalis: Yeah, yeah. I think that this one, I thought that the process would be a little bit higher here given the hurdles that you guys have to kind of deal with on regulatory with process. I think that you guys have a lot of rigor that you have to go through in getting your products out to market, and I would imagine that those processes need to be audited and repeatable and that type of thing. But it also sometimes can be a situation where, what is that thing...

Maureen Carlson: The conscious competence ladder.

Carrie Nauyalis: Right. Sometimes that comes into play. Explain to folks what that is if they're not familiar.

Maureen Carlson: It means, you know, actually that level 3 group is fascinating. They're the ones that have kind of gotten a handle on things. They have more visibility around what's going on with their people, a little bit more data than those at level 1 and 2, and suddenly they become a lot more aware of their challenges and pain points, so they're more conscious and they actually realize how much more they need to move up the ladder.

And this data's not being shown here but interestingly, when I show you later the desired end goal, as you become more mature you realize how much more mature you need to become because you simply realize the advantages to doing that. So, yeah.

Carrie Nauyalis: We'll talk about that later. So now let's look at tools. While 40% have gotten to level 3, a larger portion remain at level 1 and have no tools or inadequate tools in place for innovation management. Very few have broken through to level 5. This looks like an area for room for improvement.

Maureen Carlson: Yeah, and this is in line with the overall survey respondents as far as that goes. Sometimes spreadsheets and SharePoint sites are good enough, and if that's meeting your needs and helping you speed products to market, then great. You only need to go to the level that suites you best.

Carrie Nauyalis: Yeah, and the qualitative interviews were fascinating here. Some of them actually might say they're mature but they are working on homegrown solutions, kind of a cobbling together of SharePoint and spreadsheet, but

they are realizing that's not their core competence and they need to be focusing truly on those products to deliver to market and are moving towards more of an automated solution. So I think they might be smart on that front. [Laughs]

Maureen Carlson: [Laughs]

Carrie Nauyalis: So this is how medical device manufacturer participants ranked their company overall after considering people, process and tools in that they may actually be at different maturity levels but this is sort of how they see themselves overall. And very interesting, but let's focus on what this means on the trends and the current state around a variety of factors and questions that we've asked since 2009 that starts to get pretty interesting.

Maureen Carlson: Indeed. So, pain points and risks.

Carrie Nauyalis: Yeah, hop on in.

Maureen Carlson: This is one of our core trend questions in this product portfolio research that we started back in the day, and year over year these top four pain points come up again and again. It's been central to the research and, unfortunately, it hasn't changed very much, and that's why Carrie was so interested to look at what was going on from a maturity perspective. These things just didn't change.

So here is how participants weighed in on their pain points this year. Medical device manufacturers are there in the aqua blue as compared with all participants in the survey, which we have 514 total in a whole variety of industries. While the total participants said their top pain point as being too many projects for their resources, you're industry indicated that decisions that go back and forth and get made late or ineffectively is the top pain point for 66% of the community. The next two pain points of not being able to drive innovation fast enough and too many projects for their resource is tied for second place with 57% responding that these are a problem. The fourth rated by both groups is certainly related to those top pain points – not being able to consistently and transparently measure the value of projects, which has a lot of impact as you're going to see throughout this presentation. So Carrie, I know you have a lot of thoughts around this particular point.

Carrie Nauyalis: [Laughs] Yeah, I mean, and this is something that I would pose to the group – keep the check going and really tell us your thoughts. Why do you think the medical device community suffers a little bit more than the

general population of product development companies with the decisions that go back and forth or get made late in the process? For the overall participants in the last four studies, too many projects for resources continue to be number one. I think a lot of companies suffer from saying yes to a lot of things hoping that a few things are big hits in the marketplace, and that's for a variety of reasons – they don't have data, they don't have the reports that they need to make good analyses or whatever those reasons may be. So it was really surprising to me and it's exactly why I love this Innovation Management Maturity Model to bring out these differences, and Maureen and her team can slice and dice this based on any imaginative question that I come up with. “What does this look like when we separate it by industry? How is this different?”

Maureen Carlson: Yeah, I'd love for you to debunk my thought here, but one of my hypotheses here is that you're making huge decisions, these are very high-value products and projects that you're putting resources on, and when decisions are difficult that could be one of the things, but I'd love to hear your thoughts on chat and throw in some possible reasons why, because that's significant that it's that much higher.

Joe Hage: This is Joe. I just popped in just to say I sent a note out to the entire audience. Do decisions go back and forth, get made late or ineffectively at your company. You're welcome to type back a note to us. Thanks. Going back on mute.

Carrie Nauyalis: Great. Interactive. Thank you, Joe.

Maureen Carlson: So here are the top risks, another really important part of our research to look at, one of the business tricks when managing a product portfolio. These were pretty much in line with the total participants with 60% being concerned about time to market and missing competitive or seasonal windows. There was a shift though for the second risk for medical device manufacturers as compared with the total sample. For your industry, the second greatest concern is unclear priorities as business conditions change, but for the total population—it's not quite shown here—it's their second highest risk of missing the voice of the customer and developing the wrong product. Glad to see that's not as high up for you because that's a really concerning one.

For the total population from a trend standpoint, another really important thing we learned this year is that time to market shifted from fifth place last year to the top risk this year. This shows that there is a lot urgency and

greater than ever and that this risk is escalating. For risks, it's also interesting to look at how they shift based on maturity level, well, which we'll do next, but Carrie before I do that did you have any comments you want to make?

Carrie Nauyalis: Sure. I think that time to market pressure is really key and it's actually why we titled the study *The Need for Speed* as it relates to this, because it's absolutely on the hearts and minds of people in the industry in trying to hit those target windows and as a result the associated revenue targets and margins, that type of thing. I think the recession is really over and people have shrugged that off, and now they're trying to run as fast as they can to the finish line, and so it's not surprising at all that time to market is number one.

Maureen Carlson: Okay, great. So here you see the risks that are different for those different maturity levels. So we bracketed together level 1 and 2. Those are the lower levels of maturity. Level 3 is in the middle, and level 4 and 5 on the upper end of the maturity model. And notice that for the lowest-level-of-maturity companies, they are in fact very concerned with developing the wrong product and having unclear priorities. At the highest end of maturity, they are more concerned with time to market, meeting revenue targets, and budget concerns as they probably should be, right?

Carrie Nauyalis: Yeah. That is probably the thing that keeps people up at night, is hitting those, but I love this because if you think about...look at that level 3, the folks who are right smack dab in the middle – their number one risk is time to market, absolutely where it should be. But look at their number two risk—not cutting lower-value products and projects to take away from more strategic—and see how that totally doesn't even show up in the top three for the level 4 and 5 folks. So they are confident that they've got the voice of the customer. They're confident that they're investing in the most strategic, most valuable projects and products. Now they're worried about getting it there on time and meeting those targets. So it's those level 4 and 5 risks one through three, those are all three related. So I think that's a really compelling reason for folks to move up in that maturity model to really deal with a whole different level of true things to be concerned about. I do feel for those folks who are still trying to figure out if they're shipping the right product.

Maureen Carlson: Yeah, it doesn't help to have a fast time to market when the wrong things get in the market faster.

Carrie Nauyalis: Yeah. [Laughs] So let's keep moving forward and let's continue with the current state of things but now looking at it through the lens of strategic planning, data and culture. So keep in mind those pain points and risks all the way through this and you're going to draw some connections.

Maureen Carlson: So one thing we like to do in our research is not always have multiple guests, but and to listen to the direct open-ended word from participants. I thought these were three comments that captured the sentiments of many medical device product leaders around strategic alignment and planning in the context of their most pressing concerns for managing product portfolio.

So you can take a look at these, but I think the one that stood out to me the most is that second quote, "Lack of a strategy or alignment to that strategy for the resources." This is something that is absolutely core and central to being able to drive innovation. When your strategy isn't clear and you're not able to apply your two most precious resources—your people and your money—to that strategy, you're going to struggle.

I talk to folks and—this is what I love about product development folks—when you say, what are your goals that you're trying to achieve this year? "Well, we're trying to achieve a 10% increase in revenue through the delivery of net new products to the marketplace." Fantastic! Which ones are those? "Oh, that one's a little bit harder." So that lack of alignment between the strategy and what you're going to execute and how you're going to apply your people and your money to the execution, that gap can present some problems. It's fantastic to have a strategy and it's fantastic to have to roadmap, but mirroring those two things together can be real money for your company.

Oh, and my phone calls over and over again – that gives the power to say no.

Carrie Nauyalis: Yeah.

Maureen Carlson: And we'll talk about that in a few minutes. The next several slides are my favorite ones because they're about data and obviously I'm a data person...

Carrie Nauyalis: [Laughs]

Maureen Carlson: ...but this is so central to some other challenges that you're experiencing. So we asked whether companies are killing products early enough at the commercialization process. More than 50% of companies that are medical

device manufacturing, and also in the overall community it turned out that pretty much all 500 of the...that 50% don't think they're killing products early or often enough. As we look ahead to the next few questions we'll drill into why and see how a lack of data impacts this issue big time.

Carrie Nauyalis: Yeah, and Maureen you said in passing that people were really emphatic in the phone interviews about this one.

Maureen Carlson: Oh yeah. Is your company killing products early enough? “No!” [Laughs] And then this is really key, guys. We talked to one company and basically they said, “If we were to kill just one—just one—product earlier at one date earlier in the commercialization process, we would save the company 1.2 million dollars.” I mean, my eyes kind of popped out of my head as far as that is real money, it's very tangible, and it sure does pay for some investments and innovation management. So if you're trying to get a center for process excellence stood up, well, how about [laughs] tying it to that benefit and that ROI just one product earlier or one product...one phase earlier or one gate earlier?

Carrie Nauyalis: And some have tangible costs and others talk about opportunity costs and how significant that was too. So there's a lot here. Let's go on to the next slide and talk about this from a little different perspective on...we got to use the maturity model here. So now this is showing those same results by innovation management maturity level, and you look across the bottom – as you can see from the green and red, as you move up in maturity companies do become actually better at killing products earlier. Now you'll note that these are cautionary example sizes and then it says “data is directional only” at the bottom of the chart, but I can tell you that I was comfortable showing this because the data for the overall sample is the same. It follows the same trend. And I think this is pretty significant that you see up to the right they are killing more products as they become more mature, and we'll look at why that is here in a minute.

Maureen Carlson: So now we had to ask why, right?

Carrie Nauyalis: [Laughs]

Maureen Carlson: Why are they not killing more products? Because remember that emphatic, “Oh my gosh, we have to be doing this!” And so as compared with all participants, the top reasons why medical device manufacturers are not killing more products earlier in the commercialization process – they face a lack of rigor in determining the highest-return, highest-value products. This may also be related to the next key reasons. Due to a lack

of clear kill criteria, which was actually number one for the total sample. Process that's personality-driven versus data-driven – I'm sure that's never happened to you.

Carrie Nauyalis: Ouch.

Maureen Carlson: Someone who's yelling the loudest.

Carrie Nauyalis: [Laughs]

Maureen Carlson: And possibly undefined strategy and metrics. And I think everybody's kind of saying, "Please tell us! Tell us what the strategy and the top priorities and the strategic alignment is so that we can actually say no sometimes."

Carrie Nauyalis: So this one is really significant as far as if you take a look at those top two. So the kill criteria is unclear or nonexistent. That's the number one response for all participants. And then when you look at the medical device manufacturers, I mean 10% difference on that as it relates to lack of rigor. This is one...Joe, would you mind maybe sharing your thoughts on why you think that might be, just conjecture? And those of you on the chat, please chime in too.

Joe Hage: Actually I was going to unmute myself a moment ago when a great big truck went by. This really strikes me as well. This is a significant difference, and I wanted to ask the folks on the call—perhaps not everyone has been in medical devices their whole career—do you feel that we as an industry are, I don't know, entering more projects without kind of the due diligence that maybe we've become accustomed to in our earlier industries? I really don't have a point of reference that I remember feeling this way that there was this much ambiguity going into a project in the beginning.

Carrie Nauyalis: Yeah, and when you're deciding amongst many good ideas...

Joe Hage: I'm looking at some of the comments coming in.

Carrie Nauyalis: Great. You know that whole determining...

Joe Hage: Let me just add...there's a comment here that came in from...and forgive me saying it if I'm not pronouncing your name properly. She writes, "Isn't it because the medical device companies don't have a broad enough product portfolio and it won't look good if they cut their current products?"

Carrie Nauyalis: Could be.

Joe Hage: So maybe it's a matter of, if I understand her comment, about trying to evolve the current product as opposed to revolutionize with a new product. Perhaps there's something there for your comment, and I'll put myself back on mute.

Carrie Nauyalis: Well, I think that there's also a good point, and it's that as I've learned more about the medical device industry there's not a large portfolio of existing products that we are dealing with, and so it's enhancements to existing products and maybe a smaller percentage on net new innovations. And so when you're dealing with a smaller portfolio, you're not a Procter and Gamble, you're not a Kraft or a Kellogg, especially some of these major CPG-type companies, or even having manufacturers out there like Lennoxes of the world or Flowserve, you know? So maybe you're dealing with a smaller portfolio set, and so being able to kill something earlier in a commercialization process would be a really significant kill. And if the pipe isn't full of other ideas to invest in, how do we grow the company? So yeah, there's a lot of conversation around this and we would love to continue to hear your feedback on this question, but Maureen, let's keep going and continue on with the rest of the research.

Maureen Carlson: Yeah, absolutely. So several of the pain points and risks that appear in this survey have relationships to this chart about data. This chart shows the picture for medical device manufacturers. More than 50% said they have access to data but that it can be inaccurate for a variety of reasons, and another 20% have access but it's not timely or current. Another 10% simply don't have any access to data. That can be hard to have rigor when you don't have data, and this actually really related to the fact that the overall sample, 80% are making decisions based on inaccurate or inaccessible data. Of course we had to dig in more about why, but this...

Carrie Nauyalis: Well, duh.

Maureen Carlson: This is a pretty sad state.

Carrie Nauyalis: Yeah. It makes my stomach hurt because those folks were trying to make those types of decisions and not having the data they need to really make decisions with confidence.

Maureen Carlson: Yeah, I was a little surprised.

Carrie Nauyalis: But by the way, you're not alone in that.

Maureen Carlson: Yeah.

Carrie Nauyalis: Don't think that that's just a medical device thing.

Maureen Carlson: No, no.

Carrie Nauyalis: That was across the board.

Maureen Carlson: That was across the board. Eighty percent. This is the same question though, and here's the hopeful side. I like hopeful.

Carrie Nauyalis: Yay!

Maureen Carlson: Shown by maturity so that you can see how much that picture improves as innovation management maturity increases. This again is a small sample size but it shows the same exact trend as the overall numbers for other industries, so that is specifically valid. And you see just enormous jump here, I mean going from at the 44% having immediate access to accurate data as compared as you can see with the other lower maturity levels. This is a big jump. So Carrie, maybe you want to...?

Carrie Nauyalis: And this one gives me a little riled up, I confess. So, I mean, it just when you apply that Innovation Management Maturity Model to the same question, it really shows the differences between some of the leading companies and the companies who are a little bit more challenged as it relates to managing innovation – not innovation itself, but managing innovation. And it's a really compelling reason to encourage companies, and also for you as folks in the trenches and also to your executives to say, “Hey, we've got a great opportunity here. What changes can we make to make a difference?”

Maureen Carlson: Yeah, and then we went and asked in a little bit more detail and we found that the main reasons behind the lack of accessible accurate data are the following shown here. Information is in silos – probably not a surprise to everyone. It's not centralized. There is a lack of consistency on metrics definition and a lack of ownership for reporting and analytics. And the last one there, a lack of robust technology and reliance upon spreadsheets. So metrics, analytics, process technology – I think these all interrelate.

Carrie Nauyalis: Yeah, absolutely. Those top three are all three connected. When you don't have a single source of truth and defined metrics by which everybody agrees on, “This is how we're going to evaluate our portfolio and the analytics and reporting to dig in further into those metrics or and a tool to be able to do it out of – absolutely key, right?”

Maureen Carlson: So let's look ahead to where medical device product leaders want to go.

Carrie Nauyalis: Mm-hmm.

Maureen Carlson: This chart basically flip-flops from our current state chart. This is...let me repeat the question for you: Which of the following best describes your company's end goal in terms of desired innovate maturity level? And more than 50% envisioned their company operating at a level 4 or 5, and remember that this literally flip-flops. This is so interesting to look at for all industries to see how many plan also to move up one level versus multiple levels. And if you work to download the research report that we have, you can look at this in a little bit more sophisticated way to say, "Well, do level 2 companies want to jump just to level 3 or do they want to hop all the way up to level 4 and 5?" And actually it crosses the board, and it probably depends a little bit about some of the things that Carrie talked about before. So the point here is that there's a vision but there seems to be a lack of a roadmap and a compass to move on up.

Carrie Nauyalis: Yeah. Yeah, I mean, I'm excited about the desire to grow in maturity because I think being able to mature our processes and our organizational structure and our purpose built tools can really help solve the challenges as it relates to speeding time to market, but I think that there are some gaps and we were really able to identify four missing elements, which we've kind of hinted to throughout the entire webcast. And so let's take a deep dive into these four missing elements.

Maureen Carlson: Yeah, this sums it up pretty well. Companies need to have a better defined pathway to move up their innovation management maturity level. I mean, first of all, you have to kind of say, "Well, what do we want to be? And then what would it take to get there?" And I had so many aha moments when I literally presented this maturity model in phone and direct interview conversations besides the online research, and it was almost this kind of sigh of, "Oh, wow, there's something that can tell us how to go and facilitate the discussion."

They also need to have an improved strategic alignment to their product portfolio. They also need to have more reliable access to accurate data. I don't mean to overdrill that one, but for decision-making. And they also need to develop more of a culture—that kind of came up a lot—of fostering innovation with the right balance of risk and the ability to rely on data to ensure the highest productivity and also the ability to kill products when the time's right, so fast, right?

Carrie Nauyalis:

Yeah, for sure. Yeah, so just let me translate that a little bit. A defined pathway: Start with the Innovation Management Maturity Model. Assess where you are. Talk to your colleagues. Ask your boss where he or she thinks that you guys are. Is there maybe a gap? But just go to Planview.com/innovationmodel and you can take the test for yourself, see where you are, see those criteria, and assess yourself as it relates to people, process and tools, and really take a look at that pathway or that framework as it relates to strategy alignment.

Every company has got those strategies defined, but internalizing them and aligning those strategies with how you spend your people and money is absolutely crucial. And it can be—sometimes, not always—it can be really easy to do and free to make that connection so that you understand it's great that we have this objective or strategy or mission – how are we going to get there? What are the tactics and the programs that we're going to execute to do it?

You know, both Maureen and I get a little excited when we talk about data because it is so critical, her being a researcher quite naturally. I think I'm just a geek because I love that information, being able to slice it and dice it and be able to tell stories about it, because that's how I learn. So being able to have that data at your fingertips so you can make decisions with confidence is key.

On the culture side of things—this is the softer side of Sears, if you will—being able to gently shift the culture if it's not a culture that really supports innovation. I was at one of the conferences and talking to a major CPG company that I admire so much, but when you walk up into their company they have all of their winners posted all over the place. I'm like, “Fantastic! Where are the losers? Where are the people that failed fast who are actually heroes that they were able to figure out that this was not going to be a success in the marketplace and they failed fast and were able to kill it fast? Where are those folks? Where are you celebrating those folks?” And I got crickets back. [Laughs]

Being able to have that kind of culture, you know, you think about the guy who...the guy from Dyson – how many prototypes did he go through to get that awesome vacuum cleaner? You have got to have that culture of failure; otherwise, it's really hard to innovate. And being able to support that in your organization, staff it both with people and with money.

So a few thoughts about how do you take those missing elements and maybe take some action potential in your organization? And you may be one of those champions at a level 5 and you are a rock in it and focusing on the right thing, your portfolio's humming, and that is awesome. High five to you virtually over the webcast! But for those of you who identify yourself as struggling a little bit with those pain points, wanting to move up in the Innovation Management Maturity Model, and really wanting to deliver the most life-saving, powerful, sometimes emotionally touching products to market that save people's lives, I mean it's just incredible. I love talking to you guys because you deliver products that really do change the game and make a difference on the planet.

So first recommendation: Tell the truth. We learned this when we were kids, you know, parents, "Tell the truth!" But I find that there are some organizations that have a culture of lying to themselves. It's happy time, it's smiles and kisses, and things are great and there's never been a better time to be at our company, and really being able to sit down and say, "You know, we're really at a level 2 when it comes to maturity and as a result we're suffering from some pain points and we're dealing with some risks that higher-maturity organizations aren't facing." And Maureen, I know that you talked to some folks in the interview...

Maureen Carlson: Yeah

Carrie Nauyalis: [Laughs]

Maureen Carlson: I mean, I probably didn't talk to anyone who didn't talk about this. When I asked them to rate their companies across people, processes, tools, and then overall, they said, "This is what I think. But if I were to have my executive team do this it is almost always a higher level of maturity."

Carrie Nauyalis: [Laughs]

Maureen Carlson: How interesting. But that doesn't serve them well. If they went around to their product team and the people doing the work, there's a real gap there. I think this is an opportunity to go in and all self-quiz and see what you come back with and what's the reality of things. And this is an opportunity...most of them say, "Wow, this is a way I could do it that..." and I think makes sense to everyone...

Carrie Nauyalis: Yeah.

Maureen Carlson: Yeah.

Carrie Nauyalis: It takes all of the emotion and the sting out of it to say, “Hey, where would you rate us?” “Well, I would rate us here and this is why.” And it's because of these specific bullets right here. It takes all of the emotion and drama out of it.

So number two—and it's about the strategic alignment piece, everybody is charging forward and managing their innovation and delivering innovative products to market—just find it, just find how you're going to get there. How are you going to deliver those new products? How are you going to deliver against that strategy? Make that connection. Define the destination and really move forward.

Number three – oh yes, I confess I'm opening the kimono and expressing my undying love for Schoolhouse Rock! and three being the magic number. We talked about it in the beginning with the Innovation Management Maturity Model. Think about it as the three-legged stool. When one of the legs of the stool is a little bit shorter than the other one, you might experience some challenges. So figure out what the right balance is for you and make sure that you've got that right level of people, process and tools and make strides, and make a specific plan on how to move forward. If you think about the Innovation Management Maturity Model and this whole research study, it is chockfull of best practices.

Maureen Carlson: Right.

Carrie Nauyalis: It's inherent in the answers and the questions, so you are given a guidepost of essentially how to self-diagnose and figure out how to move forward. So really take the power of that and apply it. It's free.

Number four—[laughs] we just talked about this—culturally encouraging innovation, really having an environment that's there. When folks are punished for feeling, when they are...because innovation is not necessarily easy especially breakthrough innovation – really being able to define it and then encourage it in your organization is key. Any thoughts or anything on that one, Maureen?

Maureen Carlson: Most have a three-phase kind of maybe a higher-level view than even stage-gate, and there are sort of three phases, and they knew that really failing more and having more things on the funnel but failing more of those in the funnel faster is a positive thing. But it's just not necessarily viewed by some of the people in engineering and all of that, but part of it's because I think it's that lack of criteria.

Carrie Nauyalis: Mm-hmm.

Maureen Carlson: So they don't...it just looks like doom and gloom versus a positive thing. What they definitely wanted to see was that it was faster than certainly getting to the end of that second phase because money and time are ticking away there.

Carrie Nauyalis: For sure. Our last recommendation is really to get executive management involved. Changing your innovation management maturity is not a bottoms-up kind of an initiative. This is something that needs to be coming from the executive, shouted from the rooftops to say, "We are trying to achieve these strategies in our company and here is how we're going to do it. Here is the change—ooh, it does have to be painful—here is the change that we are going to implement in the organization to get there. Let's do it together arm in arm!" So having it come from the top as opposed to a bottom-up initiative is a really key thing. You can't really do it without it.

Maureen Carlson: Mm-hmm.

Carrie Nauyalis: So one little kind of way to take that first step, as I mentioned, is to do that assessment for your organization on where you stand today, compare it against the overall survey respondents and the full benchmark report from Maureen, define what that desired end state is and you can really move forward.

So we've got one last slide here and it's how you guys can get access to this particular information. We've been spouting off some websites and information and do-it-yourself. First of all, if you have questions, don't forget to email myself or Maureen. You can see our email addresses and our Twitter handles there at the bottom, or you can in general email questions to ProductPPM@planview.com.

If you're interested in this report, and by the way, it's a great read, oh my gosh, 20 pages, chockfull of information, but the executive summary, the first three pages, are highly rich. And so if you need a quick read or something, by the way, to drop on your executive's desk...

Maureen Carlson: Right.

Carrie Nauyalis: This is a really good one and there's recommendations there at the end of the report as well. So go to Planview.com/4threport and you can get that for your organization – free, no charge, no problem.

Also, assess yourself. So if you want to do that self-assessment according to the Innovation Management Maturity Model, go to Planview.com/InnovationModel. Little widget there that the team created to really do that self-assessment, and by the way, go have your boss do the same thing and then compare results.

Maureen Carlson: Yeah. [Laughs]

Carrie Nauyalis: You can actually have it email you back the results, so really good comparison there. You can also subscribe to the Product Pulse or join us on a couple of the LinkedIn groups around product portfolio management and strategic portfolio management.

So with that I think we are done, and by the way, if you're following along on Twitter we should have said this in the very beginning, or if you want to continue to tweet, we're there under the hashtag #StateofPD. So Joe, I'm going to turn it back over to you.

Joe Hage: I have unmuted myself. Apologies in advance for the outside noise. I'll add for everyone that the replay of the slides, the survey will all be emailed to you in a link that you can download them all after this presentation.

Carrie Nauyalis: Great.

Joe Hage: First question I have comes from Madhu and I think that he's in the UK, and he wanted to ask how would he go about—yes, he is in the UK, thank you—how would he go about implementing some of the things that you've taught today and what are the skills required in the organization to work through these concepts most effectively?

Carrie Nauyalis: Great. Great question. So really being able to implement some of this, I think we...that may have come in earlier, but I think that the first step that I would honestly recommend, and it's such an easy one it'll take five minutes – go to that assessment, go to Planview.com/InnovationModel and go take the test for yourself and maybe have one other colleague take it and have short discussion about it over lunch. Really easy. And take a look at the details behind that and download that Innovation Management Maturity Model—and it is in the full report there—to really say, “Okay, where are the gaps? And most importantly, where are the gaps that if we were to fix just one thing, one thing, if we were able to whether it's free your cost money if it involves a larger group, whatever, what would be the most effective, what would be the most valuable?” and start there and talk

to upper management about what you're trying to do. But I think the first step and a great place...

And by the way, we do have some whitepapers that we'll be following on as a result of this particular study that will give you some clues on how to talk to management and how to take some of those next steps as it relates to people, process and tools. But take the first step and go to do the assessment. Great question.

As it relates to skills, I think that managing innovation takes a bagazillion skills, whether it's communication skills, negotiation skills. [Laughs] I don't know that it technically requires a lot of technical skills per se, but I think that, really, number one skill is communication. This is about opening the kimono, and as I said in the recommendation, having an honest conversation within your organization to really be able to do that. We're trying to make it as easy as possible for folks to really take some of those steps, but having that communication on how best to deliver that message and how to kind of shift the culture in your organization is about being mindful of change management and being a good change manager. Oof, that is a priceless...

Maureen Carlson: Yeah, I talked to one person specifically about this at the Horizons event actually and he came up and he said, "We're a 700 nonprofit company, we're all around the globe, and we're doing really well, we're growing and we're fine, but we're not because eventually there's going to be diminishing returns on...and we've got to expand, we've got to grow." And he said, "But my leadership team, I'm frustrated they don't want to look at the innovation part – how are we going to go pick a new group out to help?" But he said, "I'm going to take this in and we're going to do this assessment." And he's a sharp guy with an MBA, and he said, "I'm going to just use this as a way to have the conversation and facilitate the discussion. I'm just going to pick a few things." And that's exactly what Carrie just talked about.

Carrie Nauyalis: Yup.

Maureen Carlson: And I thought, "Gosh, I mean I'm glad..."

Joe Hage: On behalf of Daniel who writes to us from Romania, and Daniel tells me that he has a young company. They're only three individuals at the company, "And my question is we've talked a lot about sharing these concepts with upper management and rallying support – what is the

critical mass of employees or what is the appropriate size where these concepts are most effective?”

Carrie Nauyalis: Yeah, great question. We actually have this conversation internally quite a bit, and I've found that the tipping point is actually around about 30. We're so grateful to welcome Immucor to the Planview family of customers and product development, and they do blood testing equipment down at Atlanta and props to my good friends there, but they're about 30 people and they've been limping along with some spreadsheets and some SharePoint and they did have to take it to management in that respect. When you're a group of three folks, you can very easily sit down and have a coffee and talk about some of this stuff.

Maureen Carlson: That's about right.

Carrie Nauyalis: But defining it, writing it down, putting it up on the wall, and making sure that that strategy as your company, whatever that is, defining that strategy and making it so crystal clear amongst the three of you about what you're aiming to achieve when it comes to delivering innovation to the marketplace, having that clarity of message and strategy, that might be enough to get you there.

Joe Hage: A couple of comments from Bernard—Daniel says thank you.

Carrie Nauyalis: You're welcome, Daniel.

Joe Hage: But I'd like your perspective on...when you were talking about the metrics, Bernard said, “I've had in many cases the right metrics aren't even being collected. Each stage has different types of risks. There are hypotheses and assumptions that need to be validated. Very often those are not made clear and hypothesis testing is skipped.”

Carrie Nauyalis: Mm-hmm.

Joe Hage: “So in effect, you build based on invalid assumptions.” And he concludes that he feels that hypotheses should be tested directly instead of using secondary research or defaulting to whomever the highest-paid person in the organization is to say how they interpret it. What are your thoughts on that?

Carrie Nauyalis: Yeah, data's king there's no question. I would agree 100% with Bernard. And being able to do those hypothesis testing and running through different scenarios is absolutely critical and I would totally agree with the fact that they aren't collecting metrics. We saw that in the survey

respondents. So I would agree. And some of that is really simple to address.

Maureen Carlson: You might find this interesting, but you have exactly one of the questions that we ask in the qualitative phone survey and we decided not to ask it yet in this one, probably next year – what are the metrics for as you look in that commercialization process? And qualitative is not statistically valid, but time and time again they have really high-level metrics but not the deeper ones necessary in the early part of the process. And also, oftentimes they think there's just a disconnect on what the metrics actually are. So I think you're along the right path there.

Carrie Nauyalis: Well, and especially to that point, and I look forward to next year or [laughs] the next survey already...

Maureen Carlson: [Laughs]

Carrie Nauyalis: But what we have traditionally seen is that metrics in the lower-maturity companies tend towards the financial perspective and don't always encounter, as Bernard is suggesting, more the risk side of things, the capacity side of things and...

Maureen Carlson: Impact to the brand.

Carrie Nauyalis: Yup, exactly.

Maureen Carlson: Yeah, one of the companies was a nutritional products company and they actually have to care a lot about the brand and from very different metrics that most of us don't think about because they're about nutritional value, and I thought that that was pretty interesting. They have to meet certain metrics.

Carrie Nauyalis: But med device is the same way.

Maureen Carlson: Right.

Carrie Nauyalis: I mean, you see advertisements on television all the time for some of these products and that brand, I mean you live and die by that brand.

Maureen Carlson: Right. So if you're not delivering on your top offering that you have for that particular product, you can't make that claim, which you are going to be held to to some accountable organization. That could be an interesting metric. Maybe that's one you kill earlier in the process.

Carrie Nauyalis: Sure.

Maureen Carlson: What other questions do you have? Are there anymore?

Joe Hage: Actually, we have time for one more, and because I'm the guy with the mic I'm going to ask mine. Sorry.

Carrie Nauyalis: [Laughs]

Joe Hage: Yeah, I guess there are just some privileges to having the control of the microphone. You've convinced me that taking the survey shows skills, where they are in their development. Can you help, you know, because this webinar, thank you very much, has been free to our guests, the information you provided has been free to our guests, they go ahead and they take the survey, how do they determine—you know what, this is something that we're going to need a plan to say, "Okay, I've done enough homework to understand that I need help and I need to set aside some budget for this, if you could give us some scope."

Carrie Nauyalis: Sure, sure. I think that, you know, Planview is enterprise innovation software to really help automate this end-to-end process from idea to launch all the way through to sunset, and if you find that you are one of those companies who is a little bit lower on the maturity side when it comes to tools, and even in some cases your processes being automated via an application, then that might be a place where we can step in. We actually have an ROI tool that we use very heavily as it relates to showing value in automating your commercialization process, and that is a great first step that we start with a lot of companies to really say, "Okay, we've got X amount of people who are gathering status and doing reporting and digging through information. What if we were to centralize that just like what Maureen was talking about with all of that data and the metrics and being able to have a one-stop shop to be able to do some of the portfolio analysis and hypothesis analysis about how you should move forward in your roadmap?" And really being able to quantify that is something that we can help with as it relates to that. So that's some place where Planview can provide some assistance.

We don't do process consulting per se as it relates to product development. We do have some great partners in the space who do that, especially around recommendations on how do you structure your innovation program. So our friends at Kalypso we rely on pretty heavily and a few other companies as well who really have battle scars, as it relates to that side of it, to really provide some great recommendations on how to implement a plan on how to do that. So we can really handle it on

the tools and process side, and then bring in the experts when it comes to the resources and the processes.

And you were breaking up...

Joe Hage: Thank you very much for that.

Carrie Nauyalis: Yeah.

Joe Hage: And with that we will...

Carrie Nauyalis: You were breaking up a little bit...

Joe Hage: Yeah, I just...

Carrie Nauyalis: Did that answer your question, Joe?

Joe Hage: You did, and I'm afraid that I may break up again. In fact, sometimes you begin to answer and then I couldn't hear and...but I have been told by reliable resources that our event worked out okay. I will say that we'll upload it. I'm going to ask my friends from Planview and Appleseed Partners to share the slides and we'll make everything available to all of the callers. If we didn't get to your questions, apologies, but we have them recorded and the folks at Planview will get back to each and every one of you directly.

This is Joe Hage on behalf of Medical Devices Group, on behalf of Carrie and Maureen, I thank for joining us today.

Carrie Nauyalis: Thanks everybody.

Maureen Carlson: Thank you.

Joe Hage: We'll see you soon.

Carrie Nauyalis: Have a great week. Buh-bye.

Joe Hage: Out for now, everyone.