DRIVING DIGITAL IN BIOPHARMA CHRIS BRAITHWAITE NOVARTIS

AUDIO TRANSCRIPT

DISCLAIMER 00:02

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SNIPPET 00:17

I think we have that opportunity in drug development now, bringing in different types of data in order to understand where the unmet medical need is or where good candidate patients are going to be, or where enrollment is more successful and things like that, as opposed to looking at it through some very traditional lenses. So I think that's very much a data driven conversation.

STINGER 00:44

You're listening to Driving Digital in Biopharma, a podcast from Accenture. Your host is Tom Lehmann.

Tom Lehmann 00:58
Hi, Chris, welcome to Driving Digital in Biopharma.

Chris Braithwaite 01:01
Hey Tom, good to meet you.

Tom Lehmann 01:04

For the benefit of our listeners, can we start with a brief introduction and maybe share a bit about your background?

Chris Braithwaite 01:10
Yes, sure. My name is Chris Braithwaite. I am responsible for Information Technology for the global drug development function at Novartis. So that is the late stage science process where we demonstrate the safety and efficacy of our products and get them ready for regulatory submission.

Chris Braithwaite 01:29
Prior to joining Novartis, I was head of commercial IT for AstraZeneca. So have a bit of a varied background. I started off in in research and spent 20 years in commercial and then back in development. So I've done lots of interesting stuff in the industry.

Tom Lehmann 01:50
Certainly not the typical path to the to the role that you're in. So I imagine that has given you a variety of different experiences. And we'll probably touch on some of those today.

Chris Braithwaite 02:01
Yeah, there are some amazing similarities between the different functions. We're dealing with patients, we're dealing with physicians, we're dealing with clinical trial sites... there's some remarkable similarities between that and

what you have to do in the commercial world of Pharma.

Tom Lehmann 02:18
I look forward to exploring that a little bit further, and perhaps are some lessons to be learned from the commercial side of the business for R&D as we head down this digital journey.

Tom Lehmann 02:28
Let's start big picture here and reflect on the fact that right now, there's a lot of buzz in the industry around a variety of different leading edge technologies. And so if you think big picture about what's out there, from your experience, can organizations jump to that step in the journey—just jump right into some of the leading edge technologies? Or are there prerequisites that they have to address first?

Chris Braithwaite 02:55
I look at this through the lens of a recent journey at Novartis. I've been here for getting on nearly two years now. And I guess I joined Novartis seeing them at the forefront of digital transformation, adoption of new technologies, because that was at the forefront of the strategy that our CEO put in place when he was appointed.

Chris Braithwaite 03:18
And in that, I think Novartis were a little bit ahead of the game, definitely, ahead of some of the pharmas that I was a little bit more close too. Looking at that with joining them in, like six years on, I guess, you can kind of see that the vision is there, where the organization wants to be as there, lots of great North Star...where we need to be as an organization. But then you see a lot of the friction that's in place in order to stop people achieving those kind of transformational outcomes they're looking for.

Chris Braithwaite 03:42
It's not a new organization. Everyone in digital speak in the industry loves to say, "I want to be the new Netflix, or we should be more like Uber" or whatever it is. But then the reality of being in a highly regulated industry. But also, we bring with

us a lot of technology debt and technical debt. And it's how do you kind of shift that technology debt and also the processes that sit around it in order to reinvent the organization to really take advantage of that true digital transformation.

Chris Braithwaite 04:55
One of the things that has been really kind of stark to me, and I guess is one of the realizations of coming out of commercial, which is slightly different—you got to remember that our clinical trials last 10 to 15 years. But the technology that we have supporting clinical trials works on much shorter life cycles of three to five years. We're constantly reevaluating, upgrading, transforming. And that means that some of our trials kind of like have a unique technology footprint, and it's quite difficult to get yourself to a consolidated and simplified foundation, which you can then transform on. So it's not as easy as it kind of appears. And yeah, it introduces some interesting challenges, I would say.

Tom Lehmann 05:45
Indeed, and in there, you mentioned some of the business process and the organizational side of things and so if you look at the technical debt—which is often where a lot of organizations will start and try to work down that technical debt as they try to modernize it—and to your point that three to five year life cycle is an interesting one because you're only a couple years away from the next refresh cycle, if you will. How do you then balance addressing the technical debt with what I would call maybe organizational or process debt that comes alongside it?

Chris Braithwaite 06:16
I think there's a there's also a bit of compliance debt in there as well.

Chris Braithwaite 06:36
But yeah, absolutely. As organizations evolve, and organizational structures are put in place, as well as a lot of technologies that are integrated together in a kind of tactical fashion, you have a set of business processes, which mirror that. And organizations change, and organizations evolve, you very rarely get the opportunity to

bring this back to a blank sheet of paper and start again. And I think that kind of consistently gets in the way of really realizing that full transformation value, that people pitch to leadership teams. I mean, the number of times that I've been there and if we make this investment in technology, or if we transform in this digital way, it's going to kind of... we're going to get the opportunity to leapfrog our competitors. There is a lot of friction just by being part of an established organization that gets in the way of that.

Tom Lehmann 07:39
Is are also a challenge, just going back to your point before, around the just the lifecycle for products within R&D, that oftentimes you're trying to introduce change onto a speeding train, if you will. So you've got to you've got a clinical program that's already underway. Do you choose to address that technical, organization, compliance, process debt with some of the assets that are moving rapidly through development? Or do you wait for the new ones that are starting up? You have this mixed model of new and old all happening at the same time, I imagine that also adds to the friction, as you said, in the organization.

Chris Braithwaite 08:09
Yeah, and I don't mean friction in a negative way. I think everyone comes to do their job with the right intent and very positive intent. But people tend to choose paths that they think will work for them and lead to the best outcomes for the organization. And if it's the best outcome for the organization, it's the best outcome for our patients and other stakeholders. So, you know, that positive intent is at the heart of the way that I judge the way that people make decisions in the context of an organization like ours.

Chris Braithwaite 08:32
Having said that, a clinical trial is like a mini organization is like a bit mini business that sits in the middle of Novartis. And they have like a CEO in the context of what they're trying to achieve. And they will make decisions around organization and process and technology that

they believe will get them to the right outcome for the organization. And disrupting that, either getting people to use the latest and what I perceive to be the best thing, or even getting people to change, mid-clinical trial is extremely difficult. That is one of the big change management efforts that we have to really push as an organization, which is, well, it's not just about your clinical trial, it's not just about your patients, but it's about having a sustainable environment that's going to be fit for purpose for the next 10 years. And we can get you on an aligned kind of technology vision going forward, realizing the best, a digital vision can create for, for what you're trying to achieve.

Chris Braithwaite 09:45
And not everyone wants to invest in that. And it's not necessarily right for every project we run. So that means that in the context of the portfolio I've got, I've got to think about the new world. I've got to think about the current world. But we also have quite a legacy world that we've kind of left untouched through the period of two or three transformations, which is, an interesting set of balls to keep in the air at any given time.

Tom Lehmann 10:12
I would imagine. And with that, I think again, you're making those longer term decisions you've got you've got to balance that with the long term view, plus the short term view, who's ready to adopt, who wants to adopt, who's ready to take on that risk. And trying to view that as a portfolio, even within your space is no small challenge.

Chris Braithwaite 10:31
Yep. Yeah. I mean, that's generally the kind of gives and takes that we're making when we're making portfolio decisions. Yeah. And it brings in some other, if you want to consolidate in one single simplified endgame there's a there's a lot of moving pieces that you need to in order to get there. And you have to do it in a way that meets the regulatory requirements, and you can demonstrate that it's of good quality and meets the validation standards.

Chris Braithwaite 11:04
And sometimes migration projects are quite difficult things to demonstrate in the context of that. So sometimes you just have to make the pragmatic decision that that needs to stay as it is for the time being, and we'll revisit it at some point in the future.

Tom Lehmann 11:23
So with that in mind, I'm curious on your observations from just a couple of years ago. So while we were in the in the midst of the pandemic, there was a lot of change that was happening all at once—and probably out of necessity, certainly. That was also on the regulatory side, but also operationally. And lots of examples of, call it digital advancements, if you will, so whether that is the application of decentralized methods and trials, data cleaning in a way that we hadn't seen, the use of AI/ML and other technologies... we seem to be backsliding, at least from my observations across the industry, back to pre-pandemic ways of working. But at the same time, we proved that we can operate a different way. Why do you think we're backsliding? Or do you agree, first of all, that we're backsliding?

Chris Braithwaite 12:11
I think we had a very profound shift and unnatural shift because of the pandemic. I always view the world as there's those that are wanting to try to drive digital transformation and they're kind of like digital disciples, and they'll stand and say, suddenly, we're now in the new world, and it's awesome. And then there's a set of people who are probably more conservative in their thinking and think it's going to take time for things to change. You know, and that's the natural evolution of any kind of technology adoption, in my opinion. A set of change agents and a set of people that are kind of assessing the risks and seeing if the industry is ready to make that move.

Chris Braithwaite 12:56
I actually think the pandemic caused an unprecedented unnatural event, because, yeah, we all had to... we were in a world of "best

endeavors". And certain things kind of shifted things very much to the right very quickly. I think we're now backsliding a little... I would say we're backsliding a little bit and becoming more traditional, because I think we're learning from some of the pros and cons of working that way.

Chris Braithwaite 13:21
So it's shifted the agenda back on back to the left a little bit, which is, "Hey, we need to be a bit more traditional; we need to remember that this type of research is... its foundation is on proven methods and validation and reproducibility and quality and all of that kind of stuff. So that kind of very innovative shift that happens, we probably need to assess if it's working. I think it will progress back to the right over a period of time. And we'll end up as we always do in somewhere that reaps the benefits of new ways of working while within the constraints of some of our old ways of thinking.

Chris Braithwaite 14:05
So we're not suddenly going to shift all clinical trials to decentralized, we're not suddenly going to adopt tokenization, in order to create pseudo clinical trial sets and things like that. But I think there are methods that we can now introduce and advance things more quickly than perhaps we have done before. But I think the industry is taking a bit of stock as to the situation that we find ourselves in, in to two to three years of learning.

Chris Braithwaite 14:33
And to the people that are kind of a little bit harder to shift, it's their opportunity to turn around and say, "Well, I think we need to move a little bit more slowly." Because for two years, it was suddenly we're in this digital world, and suddenly, we're never going to see a physician again and suddenly a reps never going to see a doctor and suddenly a clinical trialistis never going to come to trial site. The world is not...there's always going to be some kind of hybrid between the two. It's a little bit like two years ago, we were predicting that no one had ever come back to the office. And suddenly everyone's coming back to the office. So it's that

kind of rebalancing. I think it's just a natural thing that's happening.

Tom Lehmann 15:12
Well, and as you said, I think the experience opened up the eyes to what could be, but it doesn't apply in all cases. And I think now and again, as we would hope, the industry is measured in how it evaluates change and considerate around what's appropriate, what's not appropriate. And when you're forced into a situation is different than when you get to consciously choose that. And I think that's the settling point perhaps we're in right now.

Chris Braithwaite 15:38
I think there was also something that happened, which was a lot of the COVID therapies and the vaccines and all of the things and the science that was developed around COVID itself, was allowed to be treated in an innovative way because of the situation we found ourselves in. I don't think there was quite as much transformation actually happening in core trials and science from what I can gather. I can't empirically prove that but, I think people got innovative around how certain patients were treated and stuff like that. But I think the real innovation happened around the COVID therapies and the COVID science. And that was one that was used for the platform of saying, this is a great new way of working. And I think we now have the opportunity to take a step back and really learn from that and see whether there's a good set of empirical data came out of that in the grand scheme of things. Because there was, there was an unnatural sequence of events happening around COVID itself, as opposed to the traditional ways that that pharmaceuticals are developed.

Tom Lehmann 16:42
I think that's fair. And I think, again, as we as we look at the reflections in the last couple of years, and certainly the expectation around speed, but how the process got there may or may not have been as innovative as we would like. It might have also been just brute force in certain ways. But we certainly saw lots of examples of again,

where I think technology or digital, or broadly played a different type of role. And then it does feel like the industry is in that reflective point right now to say, okay, what are those learnings? How do we, how do we bring that forward? How do we bring a different perspective around the time to bring new novel medicines to patients? I know, we've been we've been searching for that forever in this industry. But it does feel like we're in a different era right now. And perhaps those two ambitions come together one to say, "Okay, how do we move faster?" But then also, how do we leverage some of these new technologies in a different way that makes sense for both organizations as well as patients.

Chris Braithwaite 17:40
Yeah. I wholeheartedly agree with that.

Tom Lehmann 17:47
So switching gears a little bit here, in your introduction, you did mention that you spent some time in the commercial side of organizations and typically the classic example R&D on one side, do the product development commercial then does its job on the other side of that...you mentioned that there might be some learnings there. What's your experience on that side, as far as the adoption of the types of things that the R&D organizations are now looking at, as far as the use of data and other digital technologies and other things to really change the way that work is done, change the way the decisions are being made? What was your experience in the commercial side and what what's to be learned there?

Chris Braithwaite 18:29
So where I'm learning from and applying it to the strategy that we have here in Novartis for our for our technology environments is taking advantage of where organizations have codified business processes, standardized business processes, and made them readily available as technologies that you can subscribe to. I would say, in the first 12 years of my career we went through the evolution of field based CRM three or four times with 100 million dollar investments each time. And then suddenly, it became a

standardized commodity, you kind of accept that you're never really going to differentiate on how you capture calls in in with a rep in the field. And it became a non discussion anymore, people were not saying, "Well, I've seen this great new CRM system, and we need to go and invest in that." It became, "Yep, got all the functionality we need on the iPad, I don't mind too much than my competitors are using the same technology. Actually, the differentiator is, is the data and how we use the data and how we use that intelligence to get our reps to the, to the right physicians."

Chris Braithwaite 19:53
Starting to see that now in in GDD, with the global drug development, the processes there around capabilities that are being in a non customizable way, are subscribable to drive some of the key processes that sit across clinical trials, regulatory affairs and safety. And how do you kind of go after an IT strategy where you differentiate between the commoditized—so where you can get to that business process—and the value adding, which is how do you get that intelligence to the right people so they can make the right decisions in the context of those business processes.

Chris Braithwaite 20:36
So I think that's my biggest learning. I'd say in the grand scheme of things, I feel at least in the experience of two or three organizations, that commercial is maybe four or five years ahead of drug development in this way of thinking—things that are worth commoditizing versus things where we really want to differentiate. So yeah, definitely seeing that.

Chris Braithwaite 21:06
And then I think there's a whole journey that we need to go through in testing what really works. And thinking about the barriers and where things that will get in the way of success. So, I've been through the lifecycle of non-industry experience, people coming into pharma and kind of wanting to get excited about the patient experience and all of that kind of stuff, but not necessarily understanding the regulatory hurdles. I think

we've now got to a good sense of, at least in the commercial space, what patient engagement looks like, what physician engagement looks like, what payer engagement looks like, at least from a technology perspective. And I see that now starting to happen in the drug development world.

Tom Lehmann 22:04
Just staying on the patient experience point, for a moment... as you look at clinical research right now, where increasingly, a couple things are happening. So one is, feels like almost like a competition for the patients where there aren't enough patients who are willing to participate in clinical research to actually meet all of the enrollment curves. At the same time, there's this desire to bring research closer to the patients and actually address many underserved populations. What's the role that digital plays in that either of those to say, Okay, how do we find them, engage them and bring them into the trial? But also, how do we get to different patient populations who perhaps have not historically participated in clinical trials?

Chris Braithwaite 22:46
I think understanding where the patients are, is very much a data exercise. And I think there's some great opportunities, if you, again, learn from the journey that commercial has been through. In a world of constraint, this is kind of like how I look at it from my commercial experience, we were constrained by compute storage, and whatever and if we looked at all the data that was available, five, six years ago, we got very excited about prescription level data, but then suddenly, you realize that you can look at the end to end. Or you can look at a richer set of data in the context of exponent data or claims data in the US and you don't have to just look at prescription data to understand the patient population that's sitting around a particular physician.

Chris Braithwaite 23:37
I think we have that opportunity in drug development now, bringing in different types of data in order to understand where the unmet

medical need is or where good candidate patients are going to be, or where enrollment is more successful, and things like that, as opposed to looking at it through some very traditional lenses. So I think that's very much a data-driven conversation.

Chris Braithwaite 24:04
In the context of making things available to broader communities, yeah, absolutely. I think that's where kind of engagement, whether it's through communities, forums, all of that kind of stuff, and being able to, where it's allowed and where the regulations allow it, but being able to understand where a set of engaged patients will be, or how to create a set of engaged patients using a plethora of channels. It's never going to be one thing. But that's the great thing about digital, it's very, very easy to set up a whole set of parallel engagement points at the same time, in order to engage different communities and different styles. And it's always gonna be a balance between physical and digital, when but you can drive awareness, you can drive awareness of the science that you're exploring, you can understand what the patient experience is like. I think there's like you said, I think there's an awful lot that we can learn from commercial in that perspective. You know, commercial drives a lot of thinking around access. And this is, I would say, a similar problem.

Tom Lehmann 25:27
Well, and one would think to that there are insights that go the other direction to. What insights can come from patients and trials, their behavior, their needs, their wants, their concerns, the journey that they've been on. They don't wake up wanting to be a subject, right, as we've called it for so long in a clinical trial. They're a patient, right? They're human. What insights do we get that actually help you when that product moves forward ultimately, to be a marketed product to say, "Okay, what do we need to know about this patient population that ultimately we're going to serve with this product?" It feels like it can flow that direction once we really start to dial in that that patient experience and insight side on the clinical side.

Chris Braithwaite 26:03
Yeah, I guess the big, the big challenge for the industry, I think, in thinking that way is getting things at the right level. We're subject to a lot of ethical consideration. We don't want to get this down to markets of one that would be entirely inappropriate. I don't necessarily like the way that I marketed to by certain new technology organizations, and that's just never going to be possible in our industry. But if we start to think of, getting our science to individual... kind of almost personas that it will benefit. But it's never going to be around the individual, I think that would be a step too far in the grand scheme of things.

Tom Lehmann 26:59
Yeah, no, I think that makes sense. So as you think about then maybe the benefits, ultimately, of all of this...with the conversation we've been having around 'what role can digital play, the use of data, etc.' If you think about maybe two parts of the questions...what's the real benefit to organizations of really embracing this? And what's the benefit, ultimately, to patients? How would you think about that?

Chris Braithwaite 27:22
I think there are a number of different components to that. I would say that we will have a better understanding of our own science, because you're getting down to a level of granularity and understanding, which is what digital is all about. Digital is, for me, it's all about the data and how you use the data to make the right decisions. It's less about the kind of like workflow in the grand scheme of things.

Chris Braithwaite 27:54
But I do think really understanding our science and how our science is kind of having the right or actually wrong impacts on patients and leading to better outcomes for populations, I think that's a huge thing. Clearly, reducing cycle times and getting medicines to market. And that's not just about the bottom line of the pharma industry, but that's also getting patients to novel therapies that have typically not been treated with traditional medicines.

Chris Braithwaite 28:31
And I think, you know, it starts to make the rare disease environment, in some respects, much more viable. And more cost effective. And in that, you know, if you reduce time you reduce costs, ultimately, our medicines become more affordable to larger populations. And so, that's... like I said, how we use the data, I think the patient experience stuff... I think, sometimes we, I think, as an industry, we get a little bit obsessed by the patient experience, or that's going to drive better adherence, and all of that kind of stuff. But I think modern companies think about how do we use the data to make better decisions, is actually a better starting point for a digital transformation.

Tom Lehmann 29:27
And what's your sense with that, as far the organizational adoption of those types of capabilities? Because there certainly is no shortage of data. I think the technology has caught up with the ability to do something with these mountains of data, yet there still often seems to be in certain settings, I'd say an organizational resistance to utilizing that a different way, that there's an experience based approach, it's intuition, whatever you may call it... What does it take to really move people along that journey to say, "Listen, you got to you've got to trust the data, trust the ability to use that to make better decisions, as opposed to just reverting back to the way that you always have done it"?

Chris Braithwaite 30:13
Sometimes I think it's an exercise in change management more than anything else. I think a lot of people in the process see digitization, digitalization—whichever term you want to use—as a threat. "It's going to remove my decision making rights or it's going to remove my role or whatever." But I tend to think of it as, "Hey, it's just another tool. It's just something else that will make you more effective in your role or allow you to do other things that are better quality to the organization or, or better decision making."

Chris Braithwaite 30:52

Ultimately, human beings have to make hugely complex decisions around a set of variables that are way beyond the comprehension of at least AI today, or data science today,. This is all about making recommendations.

Chris Braithwaite 31:13
And I think if it's pitched to an organization that way, people understand and can position it better and start to drive that adoption. The one guy I think, who's done this in the industry, at least at a CEO level is Dave Ricks at Lilly.

Chris Braithwaite 31:33
He seems to and he said something quite profound at a conference I was at which was, you can teach a scientist data science and to appreciate data science, but it's a lot harder to teach a data scientist to appreciate science itself. And so that's kind of been at the heart of some of the decision making they've made in how they've used data and data science in the context of his organization.

Chris Braithwaite 32:00
And I think that makes an awful lot of sense. They see it as a tool to augment human decision making, as opposed to, it's something that's going to make human decision making irrelevant. You see what I mean?

Tom Lehmann 32:12
I do, yep. . And I do think you're right, particularly within our space. Without that domain expertise, you can have a brilliant data scientists, it's very hard to be effective in that job without the domain expertise. And just the context, frankly, around that.

Chris Braithwaite 32:28
Because ultimately, behind it there's a set amount of science that we don't fully understand ourselves. So there is a certain amount of experience which will drive that recommendation is not correct, because it hasn't anticipated these two or three events have happened. So it's that kind of thing.

Tom Lehmann 32:49

So let me jump from there to something that it's hard to go a day without hearing something about which is generative AI.

Chris Braithwaite 32:57
Yep.

Tom Lehmann 32:58
So we're in a spot now where it seems every facet of our life could be improved with generative AI. However, we're not quite sure yet, if we're fully in a hype cycle, whether there's real potential here.

Tom Lehmann 33:19
What's your sense with this of just how transformative might this be? In the end are we in a hype cycle? Somewhere in the middle of course on this is gonna land? What's your sense broadly? And then let's talk a little bit about what you'd see in the R&D space as far as some opportunities, but let's just make just broadly speaking...what do you think of it?

Chris Braithwaite 34:36
Well, clearly, we're in the hype cycle. And it's hard. It's hard for me not to be a naysayer in that hype cycle. I have a generally allergic reaction to... as we say in the trade, a hyper acute rejection to hype cycles. And I find them difficult to deal with. So, I'm desperately trying to learn as much about this as possible. I mean, in its initial manifestations, it feels like a conversational interface to Wikipedia. But I know it's cleverer than that.

Chris Braithwaite 34:18
But I think people have got very excited about, here's a true conversational interface, which kind of helps me do stuff. And if I ask it, the right question is given me a credible answer. And I think that's quite scary in the grand scheme of things. So it's definitely something to be taken seriously. There's, there's an emotional side of me that that wants to just dismiss it and say this is just something and we won't be thinking about it in a year's time.

Chris Braithwaite 34:47

But I suspect it's much, much bigger than that. And we're spending a lot of time and I'm spending a lot of time thinking about it and thinking about where we need to take it seriously. And where we think it's going to have a disruption in the way that we do work. And the individuals that do that work. But I don't I don't have an answer to it yet. But it is put some substance behind the term AI.

Chris Braithwaite 35:22
I think previously, people kind of used AI as an interchangeable term between automation, data science, chat bots, whatever it might be. But now you've got something which is the product of this was not produced by a human and it goes beyond either a set of business rules or a neural net. It's kind of like, oh, this is kind of interesting. So, I'm trying not to hype. I'm not hype person. But I am definitely taking this one seriously.

Tom Lehmann 35:54
It does feel...the generative side of it does feel different and I agree with your other point there. I think AI has been this broad collection of a variety of different things. This one does feel different. The question is where? Where might it stick? And if you look in R&D, are there a couple of call them use cases or process areas where you'd say if I were to put a marker down, I would bet that this is a place where we could see some real lasting value?

Chris Braithwaite 36:24
Yeah, so with the ethical considerations, the regulatory considerations and all of that kind of stuff, I mean, that's always something that we have to think about. As an organization that deals in human health, you know that that's a consideration that we put in front of every decision.

Chris Braithwaite 36:45
But I can see a couple of areas. Initially, that would be relatively easy to do. An organization, a pharma organization produces huge amounts of unstructured data, things that are written down, that aren't a number that goes into a spreadsheet in order to create a statistical

analysis, but all of the kind of qualitative commentary that goes alongside that, which might have some deep and meaningful insight. But it's just impossible to summarize, it's impossible to bring it together.

Chris Braithwaite 37:28
I think it has an amazing opportunity in something like that. W here there might be some hidden and not transparent fact, that could have huge implications...or just you need to summarize a lot of like data, you've got this thing that can go and read it or summarize it, pull out the exceptions, all of that kind of stuff. I think there's a fantastic opportunity there. And that's just looking at internal, if you look at it externally your research can become greater than the sum of its parts by just looking at all the public data that sits alongside that.

Chris Braithwaite 38:17
So you know, I see those as two very quick wins that you could do relatively quickly and realize some benefits. And then beyond that there's well..."Okay, so where do you take that next?" But definitely in the context purely of the generative AI concept, I think where you've got a large amount of written data, a large amount of verbiage, and turning that into something that summarizable and can start to look at exceptions, I think that's really interesting.

Tom Lehmann 38:47
And certainly no shortage of those opportunities across R&D by just the nature of what happens in R&D. And so it does, it does make sense. And certainly, you can see also just the not only the volume of data and what's created, but also just the times that that is done, the repetition of that also just creates a substantial opportunity here for any Biopharma organization. What are the pitfalls, right? So as we, as we search for those opportunities, as we try to figure out, hype versus real, real benefit...what are some of the pitfalls as you look at this that we as an industry need to be careful to avoid?

Chris Braithwaite 38:31
I'm thinking of all the hype cycles that I've

considered RFID was one, and then we had blockchain was another. So, I mean, clearly pharma companies have a lot of very, very sensitive information. And one has to be very, very protective of people's data, how they want their data to be treated, have they opted in? Have they opted out? And all of that kind of stuff.

Chris Braithwaite 38:06
Deploying this without fully understanding the implications of all of that would be extremely dangerous. So kind of taking a high risk approach to something like this would be a little bit dangerous, given the sensitivity of the data that we have underneath. Then I think it's not necessarily a pitfall as such, but why some of our previous hype cycles have never been successful. You know, if you look at the vision and what you could potentially achieve with this, just remember that not everyone has the same set of mutual objectives. So are you impacting someone else, and someone else's profitability or business model or whatever, by trying to take a hugely innovative approach to a particular business process or a particular way of engaging with a site or wherever it might be?

Chris Braithwaite 39:08
So, I mean the ethical considerations of it, the one thing that that keeps me awake at night, I would say. And that's not just in the, in the context of healthcare. I'm thinking about the context of my own daily life and what some bots reading about me right now and summarizing and telling them to double my insurance premiums.

Tom Lehmann 39:30
So many things out there to be a bit concerned about right now. But I think you're right. And I think there is an ethical line that in the industry we're in, we have to be really mindful of, in the era of data privacy, and data rights and around usage, I think these are all considerations we have to be looking at. And while we, we seek to embrace the benefit of new technology, we have to have to walk that careful line, and not lose sight of that as we chase some of these things that are out there.

Chris Braithwaite 40:00
Yeah, it's become yet another Kodak moment, right? If we're not doing this, we're going to be the next Kodak. And that's because... if we have not embraced this new business model, if we have not embraced this new technology, and all of that kind of stuff. So there's a huge sensitivity in organizations like Novartis to transformations like this, which I think is good. But I think the one thing that's very beneficial, is the kind of like the principled decision making that takes place in a pharma company, when we consider this is all about having a positive impact on patients. Ultimately, that's why we do the science that we do. So we need to be very, very careful about how we apply these things.

Tom Lehmann 40:45
Yeah, I think that makes sense. And, as you said before, I think we are we are all motivated to try to get those novel medicines to patients as fast and as safely as possible. And if you have that is the guiding points along with all the discussion we've just gone through, I think we can step back from this and feel good about the decisions that are being made.

Chris Braithwaite 41:04
Yeah, it's a...I don't think...there's no obvious answers this one. But it's, don't ignore it.

Tom Lehmann 41:15
I think it's good advice. And I would say it's also probably a good place for us to bring the discussion to a close and I think it's a good question for our listeners, right? At the end of day of where will you go with it? Don't ignore it, keep an eye on it, but also keep that ethical line in consideration, as you should consider whether it's generative AI or any other parts of the conversation that we've had. So I do appreciate you joining today. Great discussion, and it really appreciate the insights.

Chris Braithwaite 41:40
Yeah, it was great to meet you and thanks for giving me the opportunity to have this conversation. Thanks. Tom

Tom Lehmann 41:46
Absolutely. Thanks again.

Tom Lehmann 41:52

A huge thank you to Chris for joining me in the discussion today. As I reflect on our conversation, it's clear how Chris's diverse experience and biopharma has informed his perspectives on digitalization within the industry—and in particular within the research and development space. With experience in commercial, which is a bit unique for a lot of folks in this space, Chris noted that there's a lot that R&D can learn from commercial, noting that commercial is oftentimes years ahead of R&D and its way of thinking. And so the question is, how can R&D leaders look to learn from what their commercial colleagues are doing from a digitalization perspective, and then apply it to the R&D space that they work in.

Tom Lehmann 41:56

We also touched on the concept of technology process and organization debt that Biopharma organizations specifically have to account for when approaching digital transformation efforts. And given how ultra regulated the industry is and how relatively quick technology life cycles are, this is a really important part to consider. Chris emphasized it's not as simple as organizations wanting to be the next Uber or Netflix. It's a matter of investing in the right foundation to get there and facing head on the unique industry barriers faced by biopharma organizations.

Lastly, we touched on the latest technology that has risen to great prominence within the past year, both across industries and within our personal lives. And that's generative AI. It was interesting to hear how Chris has pragmatic perspective on Generative AI, and how this technology can potentially impact our industry. Where there can be real lasting value that can come with AI technologies, it will be paramount to ensure we keep the ethical considerations top of mind.

Tom Lehmann 42:47

Once again, thanks, Chris, for sharing your perspectives with us.

Connect with me on LinkedIn to share your thoughts and takeaways from this episode. As always remember to like and subscribe to Driving Digital in Biopharma on your favorite podcast platform so you don't miss an episode. And until next time, this is Tom Lehmann with Driving Digital in Biopharma.