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GREG HORN: Hello, and welcome to the Health Pulse, a podcast exploring how analytics in the health and life sciences industry is growing and its repercussions in all our lives. My name is Greg Horn, and I am your host for the series. And as always, we'll be joined by my expert guest to discuss a topical subject.

On this week's episode, we have Jonathan Richards joining us. And we're going to be speaking about projects in the pharmaceutical industry. But before we get to that, I just wanted to start by reminding you that our email address is thehealthpulsepodcast@SAS.com, where we're looking to get your questions, comments, thoughts, and suggestions about the podcast and where it's going and the content we've covered.

I just wanted to take this opportunity to thank those people who have already responded and for everyone who's been listening to the podcast series so far. The feedback we've been getting has been very good. And our guests have received good praise and commentary about the topics and subjects that we have been discussing. So thanks, again, for everybody who's contributed to that and who continues to listen to the podcast.

So we're hoping to bring more guests over the next few episodes that will bring more insight into the world of health and life sciences and looking for more suggestions through that email address. And that is thehealthpulsepodcast@SAS.com. Without further ado, please join me in welcoming this week's guest. We have Jonathan Richards here joining us today. So Jonathan, over to you for a quick introduction, please.

JONATHAN RICHARDS: Hi, Greg. Thanks very much for having me. My name's Jonathan Richards. And I'm the EMEA lifescience cells director based out of Geneva in Switzerland.

GREG HORN: Now, Jonathan, that doesn't sound like a very Swiss accent that you have there. So can you tell us a bit about how you ended up in Switzerland and your career to date.

JONATHAN RICHARDS: Well, it probably sounds as Swiss as your accent is Canadian, right. But I'm one of those expats that-- well, actually read French at university back in 2001. And ended up spending a year in Paris working for an IBM software company. And never really planned to live abroad. But ended up falling into software at the tender age of 21. And then lived in Paris until 2015 when I have the opportunity to move to Switzerland with SAS. And I've been here ever since.

GREG HORN: Fantastic. And in this podcast we also like to find out more about you as a person. So tell us something you'd like to do when you're not working for SAS or doing your analytical thing.

JONATHAN RICHARDS: Well, the transition from Paris to Geneva is an interesting one. I mean you go from a very bustling city, terraces and lots of nightlife, kind of work hard play hard place to live. Whereas moving to Geneva, you know, obviously completely different. A lot more quiet. And with that, since I got married I stopped playing sports. So most of my time tends to be now walking around the lake or in the mountains skiing. And I really have reconnected back with nature since I moved to Switzerland.

GREG HORN: That's fantastic. I must say, the outdoors seems to be a common theme with our guests and their interests, which is always good. Jonathan, we have a lot of early career people listen to the podcast. And I'm involved in a HIMS organizations about looking at early career. Now, a lot of people wouldn't necessarily see the jump from how do you read French university to working in the life sciences space. Can you just expand on that a little bit, please.

JONATHAN RICHARDS: Well I think one of the values at SAS that we have is being curious. And at the time, I had the choice to go and study at a university. And there were some great universities offering courses, Montpellier, for example. But at the time, I was just desperate to learn about business and start my career off sooner rather than later.

And so I was very lucky. I had the opportunity, through a contact, to work for this software company. And at the time it was quite perfect. Because the software wasn't just for one industry. It was software development tools used from different blue chip companies, oil and gas, through to government insurance.

And funnily enough, I did actually have some important lifescience customers at that time. And what struck me with lifescience in the industry-- and it always sounds a little bit cheesy, but it is true-- when we are helping pharmaceutical companies develop drugs and therapies, we really are making a difference.

And that's why, when I joined SAS in 2011, I was actually given the opportunity to manage Sanofi globally. I really just took it with both hands. Because I knew that it was going to be a really interesting and unique job, I would say, to a certain extent to learn about pharma.

GREG HORN: Fantastic. And that's a real transformation. And I want to focus in on transformation. So you have been very involved in digital transformation within your customer base in the environment. Can you talk to me a little bit about what are some of the critical elements in successful digital transformation.

JONATHAN RICHARDS: Well, AI and machine learning, these buzz terms that have been knocking around now for more than several years, that's all very well. You need to have cutting edge technology. You need to have data. We hear all these things many, many times. But what we probably don't hear as much about is the actual challenge of culture and cultural change.

Some of these organizations, large organizations and it's certainly the case for large pharmaceutical companies, they've been around sometimes for over 100 years. And apart from R&D, where they're used to using data to test and formulate and approve drugs, the other functions have pretty much been using the same technology more or less the last 10, 15 years-- Excel spreadsheets, your classical ERP systems.

And so bringing in new technology also means changing their way of working. And this can be really painful for large organizations. So one subject that I've certainly learnt a lot about in my 10 years at SAS is to change that culture you really need to invest in training. And you need to allow people to reinvent themselves. And then finally, I would say you must have C-level sponsorship.

The successful projects are the ones where a senior Vice President or even the CEO has taken a vested interest. So that the folks under them realize that this is not an option. This is now our new way of doing things.

GREG HORN: And that's really an interesting point. Because we see that in health care. No doctor goes to med school to be a data scientist. But increasingly, they are involved in more data. Do you find that there are certain areas of the pharmaceutical world that are more accepting of this kind of transformation. And are there any areas that tend to be more resistant. And is that something that is across the industry, or is it very specific per project.

JONATHAN RICHARDS: So, I think the first thing that I'm seeing now is that more and more pharmaceutical customers are actually recruiting folks who come from different sectors. So they bring that knowledge from retail and CPG, or from banking. But again, I think in R&D for R&D projects, 15, 20 years they've been using statistics analytics to help prove the efficacy and safety of drugs and to ultimately get them approved.

And I think there's now a strong realization that they can go even deeper with opportunities around real world evidence. Where is that extra data that we can bring in and help increase the speed to complement our traditional way of doing things. And I think going back to the culture, there is definitely a willingness and curiosity on behalf of the clinical teams doing that.

On the other side, though, Greg, if you look in supply chain, again, these guys have been using the same tools, the same way of doing things for many, many years. And so when you're bringing in technology to analyze data that's in ERP systems and you're providing a result that's been data driven rather than compiled through weeks and weeks of Excel, then you will get pushback.

Demand planners, for example, often think that they can produce a better forecast than a machine. And so there has to be a willingness to accept that part of their work will be replaced with technology. And if they don't do that, then there's always a risk that their jobs will be outsourced.

Now that doesn't mean, of course, that the technology will actually replace the people. It would just replace some of the tasks that arrive a manual, or not necessarily adding value. And so, a subject close to me really is some forecasting. Because I've implemented several projects around that.

And what I mean, is instead of going through exo hell and trying to bring data from an ERP or from an e-commerce site, one of the changes is actually using that data to help collaborate using the forecast to actually go and spend more time with the sales and marketing and the finance guys to explain how the forecast has been built and what they may not have thought of. So, the roles also change, as well. Did that answer your question?

GREG HORN: Yes, that's fantastic. I just want to pick up on that a little bit, then. Because what you're obviously looking at there is some areas where transformation is not necessarily easier. But is certainly something that is more of a low hanging fruit. So can you talk to me about some of those areas where, in the life sciences industry, we see some very low-hanging opportunities for digital transformation.

JONATHAN RICHARDS: Absolutely. I think two I probably mentioned. The first is typically forecasting, most senior vice presidents, head of supply chains, they tend to buffer up when they are not sure what the demand will be for a particular therapy drug device. And sometimes that approach can mean having stock that will ever expire, that will not be available when the patient needs it. And ultimately is very, very expensive. I mean, sometimes we're talking hundreds of millions of dollars.

Because they've stored that inventory in all of the costs that go with that. So if we can build a more agile supply chain based on data and real time demand and signals coming downstream closer to the pharmacy and the patients, then all of a sudden we really start to not only provide drugs to the right people at the right time, but also take better control of our inventory.

Now more recently, Greg, what we've seen with COVID-19, only a few weeks ago I was talking to the head of a very large US headquartered pharmaceutical client. And he basically said to me, you know, Jonathan, this problem we've got. It's not just about inventory. It really is about saving lives. If we can't get these vaccines to the right countries at the right time, then it does make a massive difference of life and death.

And so going beyond supply chain, it's also about optimizing the way in which you distribute the vaccines to the end destination. And analytics also, I feel, has a massive role to play here as you start to use techniques such as network optimization, and coupled with the route distribution optimization, as well.

GREG HORN: So Jonathan, you talked a lot there about some of the real advantages that we see in the space. But at some point, when does this become a choice, a nice-to-have, a thing to do. Or when does it become something that companies really have to do right now.

JONATHAN RICHARDS: Well I think the answer's twofold. The first is, we have a lot of geopolitical challenges these days, Brexit, different regulations. And if you don't have the ability to understand and manipulate your data, then you are going to find yourself a lot more reactive than proactive during challenging times.

And COVID was a great example. So many boards-- well, also senior management teams-- all of a sudden were working out how the hell are we going to get products across different borders, literally. And what could be a plan B, where do we have other stock that we could perhaps source. And this can be an absolute nightmare if you haven't got the right dashboards with the right analytics behind it.

Secondly, I've spent quite a bit of time in retail and CPG, some nutrition products are often made in different locations and then brought together, which makes this challenge even more complex. But in the world of pharma, we've also found that some new therapies, especially in oncology, immunotherapy, they need to be made close to the patient. And they're expensive.

So if you're not under complete control of your supply chain, all of a sudden it can have a massive impact in terms of cost and getting the drug to market and to the patient.

GREG HORN: So for people who are like looking at this now thinking, I want to speed up transformation, what does engagement start out like. How does somebody get moving on this. Because often that's the most difficult piece, is just that get started.

JONATHAN RICHARDS: Great question. And I hear so many people that I first meet, clients, saying we want to have predictive analytics. We want to do digital transformation right across the organization. But that's really, really tough. And not just for the culture, but also if you've only really got reporting, it's very, very difficult to go straight towards a more predictive capability.

And so my tip for companies embarking in their digital transformation, especially in the world of pharma, is first of all, these projects need to be led by the business. Of course, that doesn't mean that IT is bypassed. On the contrary, the IT guys often know where the data is stored, how to access it in a secure way, obviously very important in a regulated environment such as pharma.

But the folks in the business, those are the guys that are actually close to the business challenge, whether it be in R&D, supply chain. And so what are some of the current problems that they're facing, and identifying those. And then working backwards. Do we actually have data available that will help us address those problems. So it sounds pretty obvious. But the danger of going the other way is you end up building platforms and systems that don't actually address any business problem.

Building those platforms can be expensive. And often by the time you build them, they don't actually work. So start small. Address the key business problem. And once you've addressed it, then make sure that you're able to role it out at scale. And I think one of the biggest changes that I've seen, 10 years ago, it would have been pretty unheard of for most traditional pharma companies, for example, to put their data in the cloud. But now it's completely changed.

We're seeing a lot of our clients, they really are interested in shutting down their data centers and moving to a cloud provider, even hosting with SAS. But the reason that's a game changer, Greg, is because this provides an ability to scale up solutions in a fast and reliable, secure way.

GREG HORN: Fantastic. And we like to kind of think to the future, as well, on this show. And what do you see as some of the projects that are coming up in the pharma space and the life sciences space. And what kind of timescale do you see them occurring over.

JONATHAN RICHARDS: Well, going back to the cloud computing, I think this is, again, this is a game changer. If you can spin up solutions, deploy them in the cloud, then you're going to gain a lot more speed. So, wow, it's a tough one to ask. I see so many opportunities. First of all, in supply chain, again, the days of having an agile forecasting demand planning system just with Excel and ERP, those days are gone. And pharma companies need to jump on that train and start to better leverage the data that they've got available to create an agile supply chain.

Secondly, we've seen a COVID, not just for pharma companies but even at SAS, it's becoming really hard to actually go meet your customers. And health care professionals and pharma companies relationships have kind of been turned upside down, just like it has at SAS. We can't go and meet our clients for coffee. Now, how can we tell them about the latest therapy or drug, innovation that we're doing. And so I think the way in which we digitally engage with doctors, health care professionals, and even patients to a certain extent, has become even more important.

The acceleration there is going to be massive. Secondly, I think in the R&D space, there's a lot more that can be done in the area of real world evidence, devices now that record individual health data on specific people. We're going to see that use more and more in the development of drugs to ensure that we have personalized medicine. And I would also expect there to be more collaboration, sharing of data right across the value chain, which kind of ties into what I said before with medical devices, but also with health care providers as well.

Typically, pharma companies have been quite closed and siloed, not just internally but also externally. And again, those days are definitely gone now. You start to see the collaboration even for the development of some of the vaccines. That means opening up systems and working together more as one big ecosystem where the projects need that.

GREG HORN: Brilliant. Fantastic. Thank you very much, Jonathan. That's very interesting. And thank you for joining us today for this conversation. And I'm sure our listeners are going to have plenty of feedback on this, particularly because this theme of data sharing within the pharmaceutical industry has now become a number of times to a number of episodes. And we've heard some different opinions on the merits of it. So, listeners, please keep those questions coming in.

Thehealthpulsepodcast@SAS.com. We're always using these questions and comments to shape our model guests and future episodes. So please keep sending in suggestions so we can make the podcast into the future. So all that's left for me to say today is thank you for joining me on the Health Pulse. I've been your host, Greg Horn. Please like and subscribe to receive future episodes. And we'll be back in a couple of weeks. Thank you.