What we wanted to do, was to ensure we understood how we were engaging with our patients, what the opportunities are, and how we are building that out into a robust ecosystem. So we look at these as steps along our journey to have that broader ecosystem approach. It's a challenge to define that pathway from being in the Pharmaceutical industry; it's a very different model than doing research, development and commercialization of a drug.

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**Tom:** Hello and welcome to Driving Digital in Biopharma. My name is Tom Lehmann I am your host for today's discussion and this podcast series. We’re happy to continue our series on the topic of digitalization in biopharma as we explore the experiences and the progress that has been made with digitalization in our industry, as well as the challenges that organizations have faced along the way.

In today’s episode, I’ll be chatting with Stephen Davies, who serves as the Vice President of Enterprise IT for Eisai’s Americas region. Stephen joined Eisai in 2018, after spending time in technology-focused roles not only within biopharma and biotech organizations, but also on the industry research and analyst side. As an enterprise IT leader and top industry analyst, Stephen brings his diverse background to help us dive into and understand Eisai’s digital transformation journey.

As we’ll hear from Stephen in our conversation today, Eisai’s approach to digitalization – and all of their business and technology initiatives – is in support of Eisai’s philosophy of human health care – or HHC, as we’ll hear Stephen refer to it. Eisai’s focus on human health care is so embedded in the fabric of the company and I recommend that you to keep this HHC philosophy in mind, as you listen to Stephen share his stories and experiences with driving digital transformation at Eisai. I hope you enjoy my conversation with Stephen today.

Welcome, Stephen, to Driving Digital in Biopharma. Happy to have you here.

[00:00:53.27] **STEPHEN:** I’m very glad to be here.
Looking forward to the discussion. So you've spent time in your career in large bio-Pharma organizations, smaller biotech's, also some time on the industry analyst side.

And I'd expect that in those roles, it provided you with a nice cross-section of first-hand experience and exposure to the evolution of a few things. How companies have organized around technology, how they've defined their technology strategies, and then probably more recently evolving their focus towards driving real business and patient value with digital.

So you've been at Eisai now since 2018 and in a leadership role. So let's start our discussion maybe a look back in time, and cover the digital journey that Eisai has been over the past few years.

When you joined, how did you characterize where Eisai was with this digital journey just a few years ago?

So in the most recent period, before I joined the company, there was minimal investment in some of the foundational technologies that we had that were operating the company.

So from a digital perspective, to say where we were on our journey three years ago, we were very early, very early from a platform perspective. But we were more aggressive from a business strategy standpoint as to where we wanted to go.

And that was very much tied to our mission which is human health care. Which is really focusing on patients and families, and that's a clear differentiator for Eisai.

So not long after I joined, there was an announcement out of our headquarters in Tokyo around moving to a new global strategy to deploy an approach to having a business or a healthcare ecosystem approach in engaging with patients and families.

Which meant from a digital perspective, you needed to have a platform and a capability and a competency to make that happen. So that started really in earnest in the 2018-2019 time period.

And so what were some of the things as you look back that had to be put in place first? Like you just said, establishing some of the foundational capabilities, or even just that digital foundation to enable that business strategy. Where did that journey begin?

The journey actually really began frankly with technology, and more with putting in place an IT strategy which we didn't have at that time. So that was the key deliverable or the key piece of work that I was leading our IT leadership team to make happen.

So we ran a number of internal sessions, and we really frankly, we drove this ourselves. It was let's make this happen, and let's leverage the partners that we do have, and get input to what we're doing.

But we need to really own it. And one of the primary reasons we wanted to make sure we had that strategic approach is to link it back to those business drivers, classic IT, you want to be aligned with the business.

And that was very critical to us. But when we combined it with the fact that we were behind in our investment in technology, one of the key pillars, and we have six pillars in our strategy that we had to focus on, was what we termed active modernization.

Which is really reducing our technical debt, improving our digital literacy in the organization, ensuring we modernize that we have some change leaders who are driving that change. So that was one critical pillar; part of that modernization was replacing some quite old and dated platforms. We were still running a very aged and dated email platform, and we wanted to get into Microsoft 365 in the cloud, and that was a major effort. We had laptops that needed to all be replaced.

We needed to move from Windows 7 to Windows 10. So these are kind of core
foundational elements that needed to occur to really drive that digital journey.

[00:05:53.07] TOM: And did you find that along the way, as you were putting in some of those building blocks, that there was an approach to take it in a step-wise manner to get there?

Or did you think through to say okay, are there some places where we can leapfrog? Or we can do this perhaps at a faster pace than we've seen across the industry?

[00:06:13.00] STEPHEN: We did, we absolutely did. And I'd say initially, some of them were more to a certain degree tactical, in that we were looking at opportunities to test out how we can deliver and engage from a digital perspective with our patients and with the communities that we connect with. So we did deploy some early, and this was probably about 12 months after I joined the company.

We started on efforts to deploy some digital capabilities related to insomnia, which is one of the therapeutic areas that we work within. And we deployed a new website and a new voice-enabled method for patients to capture information about how they are sleeping. So it enabled us to build out a capability with a variety of strategic platforms. Whether it was deepening our expertise in our web content management environment, as well as build out a voice-enabled capability, leveraging AWS for the first time.

So we started that journey in getting into the cloud and driving that capability to architect and design an end-to-end solution that integrated multiple platforms.

[00:07:45.12] TOM: And along that way, just use it with that one as an example, or if there are other examples like it.

Where were the challenges? Was it more within the internal organization capabilities? Or were you finding that on the external side to get uptake and acceptance of those types of solutions?

[00:08:00.04] STEPHEN: I think the challenges are multifaceted. I think the first one is the focus as we're growing. This is a capability organizationally; how are we operating it? And this is something that is really an industry challenge as to how do you operate your ecosystem or your digital engagement approach. And there's been many examples of Pharmaceutical companies taking that step into that world and then backpedaling, depending on what mobile app or patient engagement solution that they're developing.

So what we wanted to do was to really ensure we understood how we were engaging with our patients, what the opportunities are, and how we are building that out into a robust ecosystem. So we look at these as steps along our journey to have that broader ecosystem approach. It's a challenge to define that pathway from being in the Pharmaceutical industry; it's a very different model than doing research, development and commercialization of a drug.

It's a very different process operating in the technology world. We don't have software developers in research; for example, I mean we have scientists in research focused on developing a new drug.

So focusing on the digital side is really a different business model and business journey, so that certainly was a challenge. The other was for our IT organization; we did not have the requisite technical or even business skills to design or architect such a solution.

So it required a lot of engagement with external parties, but my goal has always been to make sure that we start building that internal knowledge and that internal capability so that we can really drive this change and drive this transformation.

And that actually became part of our IT strategy and the resulting mission and principles that we built. So the idea that we need these architects inside our own organization as Eisai employees committed to human health care and our mission is critically important for us.

[00:10:29.22] TOM: And are you finding that those architects are aligned with sort of singular
focus and in narrow areas? Or you’re creating a broader foundation to say, okay, we’ve got a broad vision; we’re not sure all of the pieces that are going to come together.

We need to make sure the architects and the talent that we have is agile enough to be able to pivot depending on where we go?

[00:10:52.24] STEPHEN D: That’s a great point. I mean, you just used one of the words in one of our six pillars in our IT strategy, which is agility, one of the pillars, is agility, flexibility and scalability. So that isn’t just about getting into, say, cloud, which is often used as a synonym for those terms.

But it’s also about the people and being those digitally-enabled architects that yes, you may be focused on this one discipline today, but you’re capable enough that you can shift and adjust and drive and learn.

So agility, you put a different word in front, you say learning agility, that is a key competency that we’re looking for. Not just in IT but the broader organization, as well as building a new IT operating model that is agile, flexible and scalable.

One of the terms that I’ve used throughout my career is just enough governance. So let's not overwhelm the organization with governance. A third pillar of our IT strategy is smart compliance, which is definitely making sure that we have the right policies and procedures to ensure data integrity and really mitigate risk.

Trust with our patients and our families is critical, so we have to be compliant, but we don’t want to inhibit our agility and our flexibility to deliver great digital solutions.

And that’s that balancing act in our industry when you're in the Pharmaceutical, a highly regulated industry. Yet, you want to go down the digital path. How do you create that balance between those two?

[00:12:39.23] TOM: Without a doubt. And I think we’ve heard that in previous episodes, where they’re just trying to find that, essentially that balance between what is this historical way of working which may be perhaps more rigid. More waterfall-like if you will into a model where digital, which is you can’t have the tolerance anymore for those 12 to 18-month pathways to get to new technology.

Things are happening faster; they’re changing faster. But you can't put the operations at risk; you can't put patients at risk. And finding that healthy relationship with the quality and compliance groups becomes really important if you really want to embrace agile in this space.

[00:13:17.14] STEPHEN: Yes, I agree. And one example of that for us is a deployment of a new platform to manage not just the artifacts that come out of computer systems validation. Which for those that work in our industry, is a term that everybody understands very well and understands the heavy lift that goes along with delivering a fully validated system. But we’re deploying now a platform to really move to very much an electronic environment, not just for the documents, but for the process and the way these things are built, and the way we test these solutions.

So that we can be more agile that there isn't a long delay between deployment of version one to version 1.1. It's almost continuous delivery of new capability and functionality, which in the world of computer systems validation, is kind of the antithesis of that waterfall approach.

[00:14:31.27] TOM: Indeed. Yet, it seems like we’re moving in the direction where we need to find that model that works and bring the business along with that. I mean, this is the other part of that conversation that we tend to have, is that you may see an IT organization embrace this and really start to work their way up the curve.

But then you got to bring the business along with that, and of course, you got to bring Quality along with it, and it’s a change, it’s a change of mindset. But I think in this era of real digital transformation I think we’re starting to see that become more of a standard.

And I think sometimes even just realizing that
we're constraining our own thinking just because of our legacy ways of working, and not challenging the way it's been done in the past to perhaps find a more efficient way to get through this, and to your point, around agile and flexible, you have to get there.

[00:15:18.01] STEPHEN: Yes, absolutely. So one of the other challenges that I see, and it goes back to one of the earlier questions you had around challenges, is that the recent, maybe not so recent, dating myself here. But say that the past 15-20 years or so in the IT era. And I can go back to the late 90s and the early 2000s when the big ERP journey was the main focus, and it was all about trying to put everything in that huge box as much as you could and make it all integrated.

And get rid of these different solutions from a technology perspective, and it was a focus on configuring and building out that huge platform and focusing on process optimization.

Whereas you look today and you think about digital, and it's all about almost the reverse of that concept, because you're breaking up all these different actions, services, processes whatever you want to term it as.

To say you've got this granular piece of activity or piece of information that you now need to connect together, and you want to have an environment that permits that will change the platforms and the capabilities that you need certainly.

So you're deploying things like a Mulesoft and or Dell's solution in the space to do these things and move this information around. That before would, your focus was well, let me just make sure everything runs in my huge ERP deployment, and an internal perspective. And then you also have to exchange and work with external parties, whether it's customers or partners and such. So that whole world requires a very different capability from a technical perspective for your IT team.

What you thought was happening 15 years ago when people were saying, well, we don't really need people who can code anymore, we don't need people that operate at that level, it's the reverse.

Those people have incredible value now, and those are the folks that we're all battling over frankly. To say I need that person who can architect that solution, who's had that experience in building out these service-based solutions or these composable solutions, how do I find them. So we added this term to our IT mission: that is hhc technologists, that we are hhc-driven technologists. And it was a conscious decision to use that word in our mission, to say that's how we differentiate ourselves in the organization. We need to understand the technology and the business, and we need to be able to be the organization that pulls them together. There's certainly the goal that in certain platforms, whether it's business intelligence or low code solutions that you want the citizen developers or that citizen capability.

But underneath it all, needs to be a well-architected connected platform to deliver that digital capability.

[00:19:39.08] TOM: And with that is really understanding the business usage of the business value. And so that separation that we saw where IT was just there to be an enabler of the business is certainly pivoting, right? The more those come together, and even just as you're calling it right here, the hhc technologist speaks to that.

At the end of the day, it is a closer alignment with the business and a closer understanding and how technology shapes business strategy and business strategy, of course, influences the technology strategy. But if you don't have the right talent, it's a difficult climb for you to take as an organization.

[00:20:15.29] STEPHEN: Yes, that's absolutely true. And one of our key principles is do not outsource strategic capabilities and knowledge. Now I know I'm speaking to a company that engages in outsourcing and managed services. But I think it's critical for us to be the organization that drives it, that understands how we're leveraging it, based on what our business strategy is.
So when you look at saying that we want to have an approach from an ecosystem standpoint, how are we making that happen, how does that connect to our therapeutic areas, how does that connect to our pipeline of solutions for patients? And that's really what we look at is we want solutions; it's not just a drug; we want solutions that we're driving towards, whether it's in neurology or oncology.

That our patients and their families really can live their fullest life. And these are critical elements for us for the future.

[00:21:20.12] TOM: So let's use it as a jump-off point then as we look ahead. You took us through a little bit of where Eisai has been, the journey that you've been on. With a very distinct focus around human health care and a historic view of beyond the product in the past.

Now, as you pivot forward, and you've mentioned this a couple of times, so let's go down this path of the concept of hhc plus, human healthcare plus, the ecosystem, is a pretty novel way of looking at this from the vantage point of a bio-Pharma organization.

Really looking at the full ecosystem. And not doing it just for good marketing purposes, because it needs to be patient-centric, just truly looking at this in a different way. Can you just share a little bit more with the Eisai vision here is around hhc plus ecosystem?

[00:22:09.24] STEPHEN: Yes. So going back to hhc and that philosophy, which has been in place at Eisai for many years. The key in that philosophy again is to give first thought to patients and their families. From a healthcare perspective, it's to make sure that they're experiencing the benefits of health care.

When you look at it at a broader level, what it means is we, as Eisai employees, engage with patients, and that's part of the hhc philosophy. We have a direction as a company to try to understand what patients and what their caregivers are experiencing. So everybody puts in a percentage, one percent every year, to engage in that.

And we have internal processes and internal methods to gather this information. So we understand what are the challenges that the patients that we work with are facing in specific therapeutic areas. Great example is Alzheimer's, Dementia and A.D., which is one of the areas we have a deep focus in and have for many years. There are certainly major challenges that patients and families face, and we want to understand those as much as possible.

And then you say, well, if you know all that, how can you leverage digital to extend it beyond the engagement, beyond delivering therapeutic approaches from a drug standpoint, how can you extend it, right? With digital therapeutics or digital solutions of some kind.

And that's where we're looking at this hhc philosophy and the ecosystem in an even more complete fashion. And really, the goal there is to make sure people live their fullest life. And when you think about it, then from an industry perspective it's thinking differently.

It's not that we're just looking at the concept of addressing a disease that somebody has, but that we really want to drive towards solutions scientifically based, that can allow that person to not just address an issue but look at avoiding the issue. So prediction and prevention.

So you get to the point that you are really living the fullest life you can. And ultimately, that's I think what anybody would want.

Certainly, if you do get a disease, or have something that happens in your life or in a family member's life, you want to do something about it. You want to address it and resolve it. But in most situations, you'd say, well gee, I prefer not to have had it happen. I would prefer to know what I can do to live a fuller and healthier life.

So that's where you take this, the hhc philosophy, and the ecosystem, and digital, and the scientific evidence and approaches for specific disease states. What are the possibilities of creating an environment where you are, predicting and preventing those diseases?
[00:26:44.08] TOM: So let's just explore that last part a little bit more. What would it take, or what does it take to put that in place, that make that ecosystem work. I've seen a little bit about the Eisai universal platform. Is that a core part of making this vision a reality?

[00:26:59.15] STEPHEN: Absolutely. And it's certainly not, going back to my comment earlier about the ERP world. There's no software vendor out there selling something that you could call the Eisai universal platform that will be one piece of technology.

It's a holistic concept to pull together, whether it's other industries or solutions that we may have or solutions that partners may have, into really a package of capabilities that we are able to deliver across that full ecosystem.

So it's not certainly just one thing; it's many things that you bring together into a holistic or a full solution package. The key is that the digital platforms and capabilities that exist today, that didn't exist 15-20 years ago, start to make the potential of these capabilities and these solution packages, the potential for them to be a reality. And when you tie it with scientific evidence and clinical studies that prove some of these concepts or demonstrate evidence that it's possible to combine, say whether it's diet, exercise, all kinds of other capabilities for somebody.

If you combine those, how does that predict or prevent or do something for a disease state?

[00:28:47.25] TOM: How much of this is a broad data challenge at the end of the day, in order again, if you're going to move from treatment into prevention or into prediction.

How much of that is really breaking down the data to understand what might happen, and if it is to happen, how do you prevent it from happening?

[00:29:07.28] STEPHEN: Yes, that's an absolute critical part of any ecosystem approach is the information; it's central. And if I was to show you the architectural representation of what we've built out so far, right in the center is data and analytics.

And machine learning, and A.I. and all those wonderful capabilities that continue to grow. And that's an absolutely critical part.

It also becomes almost a currency to a certain degree, in that the data that is captured, whether it's by us or by a third party or a partner, has value, and it has value not just to finding the hidden answers but also as something that you can connect with another organization or connect and develop more of an end-to-end engagement with a person that is in your ecosystem.

And if you think of it from your own perspective. If you go to an automobile website for buying a new car, and you enter all this information in that website, and then you walk into a dealership to buy that car or to talk to the dealer about this new car you want to buy.

If that dealer has no idea what you're talking about, you're going to think about that ecosystem you're now living within and say well, why did I communicate all my information with that manufacturer if they can't deliver it to me, when I go to the dealership where I'm trying to actually do the buy transaction or find out, they don't even know what I did.

Why am I living in this ecosystem? So that whole understanding of how you're exchanging the data and then learning from it is critical.

[00:31:06.00] TOM: So in a world where data privacy and consent around data is becoming more and more important for people, whether it's for just again healthcare data or other types of data. How do you navigate through that in something like this?

[00:31:35.05] STEPHEN: That needs to be foundational. That goes back to what I mentioned about our strategic pillars, and one of them being smart compliance, and digital trust is absolutely one of those pillars.

So it needs to be embedded, not just into that specific ecosystem solution, so for example, the one I mentioned earlier around sleep. It's not just
embedded in that solution, but it's also needs to be anywhere that data might go.

So if, as part of that consent, that person that's using that solution consents to their information to be leveraged in a certain way or used in a certain way, how do you make sure that consent follows that information wherever it may go.

So you don't break from what you have agreed to with that person. So that's a critical part of the design of the platform, not just from a make the data available perspective, but also understand what truly is private, what should be protected, what should you have the capability of removing if that person at a later date makes that request. And now you say, well, I need to go out and get that information where it may have landed, maybe it's with a third party and tell them okay, you can't use that anymore, because that consent is now gone.

That's a very complex architectural element for the overall platform capability that we're looking at in this ecosystem world.

[00:33:22.15] TOM: And what are some of the other components we talked about, data, and obviously we're talking about some of them again, being able to follow the data through. What else is critical in order to make this platform or this concept come to life?

[00:33:35.24] STEPHEN: I think one of the critical ones is the engagement with other parties, right? With third parties as partner, whether it be a tech partner or another Pharmaceutical company, or could be a payer, it could be a provider, could be government. Whoever you're engaging with another industry, how can you enable that? The connection going back to our strategy, one of the key pillars is innovative collaboration. So having the platforms and the capabilities to connect to and engage, not just have a meeting, but actually exchange information, perhaps even at a very granular transactional level.

We're looking at solutions right now where we're building out multiplicity of approaches, one that might be at a granular transactional level to offer a digital therapeutic capability.

The other might be more of a file-based exchange of a broader set of information with more of a service.

How do you build out those capabilities to make sure that you've got a business architecture that you can sell such a service, but you can then also, from a digital perspective, deliver that service?

[00:34:58.29] TOM: Which is a pivot, right? And again, you brought this point up before around just having organizationally the right model in place to be able to move in this type of direction is a big consideration, right?

You can have this vision; you can have this perspective where you move beyond the traditional Pharmaceutical treatment.

But you have to have the organization that's going to surround it; you've got to have the capabilities and then those external connections in order to make it happen. Without that, I would assume that you'd struggle to be able to drive this forward.

[00:35:30.15] STEPHEN D: Absolutely. We can go out and say, well, we want to do this, what are the technical platforms and capabilities that we need to make that happen.

So if we want to be able to exchange information at a transactional level with a payer, with a provider, with some type of organization. And we want to ensure that we've got the right technical capability to do that, that's one thing.

But if we're doing it where it's part of the overall process to deliver a service, then you might have to layer on all kinds of other capabilities that we may not have today, that are not technical, but they're more, maybe on the sales, the marketing, the product development, those kinds of capabilities that go beyond just the technical capability of delivering that service.

[00:36:33.16] TOM: What's on the horizon then for you, as you look at the broader philosophy that Eisai has publicly put out there, this vision around this platform we've been talking about. What's next?
Yes. I think that next is making it more real from an end-to-end perspective, with the actual solutions along that journey of a person. Not necessarily a patient, because remember, if you are predicting and preventing, it's not a patient, right?

Because maybe you predicted or prevented the actual illness or disease from occurring. So what is the journey, and making that real for the markets that we operate within, which is actually an intriguing challenge in our world, in the healthcare world in that every market operates differently.

So the way the U.S. healthcare system and healthcare market operates is different than Japan; it's different than Canada. So the engagement and the way you present those solutions will vary by market.

That makes this ecosystem approach actually more complex, even than what we've already spoken about. Because there's a market by market differentiation. So here in the U.S., our goal is to begin architecting out that solution from a patient or a person journey perspective. And having those solutions and services along the way, depending on the therapeutic area. So we've got a number of different approaches that are in process right now, some that have been delivered in, I would say in a prototype or a proof of concept mode.

And as we move forward, those will start to be delivered out into the market, and we'll start to stitch them together into that broader Eisai universal platform approach, where they become solutions.

And if you were to again look, as you're looking forward and put maybe a call to action for the broader ecosystem. What are the things that the rest of the ecosystem needs to perhaps line up to do here in order to make this work?

In order to really make it work, all the participants have to be looking at it from a patient, a family and a person perspective; that's the key. We all have to have the same objective in mind, which is the ultimate result.

Which is allowing people to realize their fullest life. If we all have that same objective, then we can collaborate and deliver this kind of universal platform. This ecosystem approach to deliver that capability.

I think it's a great way for us to bring this to a close, and I would agree; I think this is where as an industry, as a broader ecosystem, we've got to come together. I do like the theme here around this moving away from treatment to prediction and prevention; it's a different perspective.

But even just as you said, you were careful with your word choice around people, not patients, right? I think that that's important as we think about where do we go as an industry and how do we ultimately move towards prevention as opposed to having to think about particularly long-term treatment.

I think this has been really helpful to take a look back, just to see where Eisai has been. Interesting journey to get to today, and I'd say a very compelling philosophy around the future and the role of Eisai in this broader ecosystem, and there's a lot of conversation right now in the industry around that the ecosystem and what that means.

I think this is a great way to look at it. And I think from a technology standpoint, certainly a very interesting way for technology to play a different role to enable a health outcome than perhaps we've had in some of the other conversations. So again, appreciate you joining today, really enjoyed this discussion.

Well, thank you very much for the opportunity. I've really enjoyed it too. And perhaps when our journey is, further along, we can re-engage and give you an update.

Sounds good; I look forward to it. Thanks for joining.

All right, take care.
TOM: A huge thank you to Stephen for joining me in today’s discussion. While Eisai, as Stephen noted, is still in the early stages of digital transformation, many of their core digital transformation experiences and challenges are similar to what we’ve heard from some of our other guests.

For instance, one of the themes present throughout many of our episodes – and that we discussed with Stephen today – is the idea of talent, and how an organization can ensure they have the right people and right skills to drive digital innovation internally. And the word “internally” is not lost here – that at the end of the day, an organization needs to drive its strategic capabilities and digital knowledge from the inside, as a result of their own business strategy.

I also really enjoyed Stephen’s perspective on the patient – and how this ties back to Eisai’s hhc philosophy. Stephen was purposeful with his wording – that at the end of the day, Eisai’s digital solutions need to support the person journey, not necessarily the patient journey as the industry shifts from treatment to prevention and prediction.

A few questions to consider:
Within your organizations, are the digital transformation efforts part of a comprehensive patient – or person – strategy? What have been some of your challenges in driving digitalization initiatives, in an industry so heavily focused on compliance and patient safety?

As always, please connect with me on LinkedIn to share your thoughts on these questions, and your thoughts and takeaways on the episode as a whole. I thank you all for listening. Please remember to like and subscribe to Driving Digital in Biopharma on your favorite podcast platforms so you don’t miss an episode. And until next time, this is Tom Lehmann, with Driving Digital in Biopharma.

[End of Recorded Material]