

# Podcast: Modernization with Purpose: Transforming Legacy Life Sciences businesses with Cloud and AI

**Moderator: Dr. Andy Packham**

0:10

Good day and welcome to another Elevate podcast.

I'm Andy Packham, chief Architect for the Microsoft ecosystem at HCLTech.

Today's episode, we'll explore something that's really exciting.

It's something that I think impacts every single one of us in some way.

And that's kind of the world of mod, of healthcare, life sciences and how that's been modernising.

It's been an incredible time with scientific discovery being driven by AI, but also the patient interaction been improved and changed dramatically.

By the way, AI is changing the way that we think about the different services, but it's also critical in all of that that we think about how that is done safely, it's done inclusively and it's done in a responsible way.

So today I'm really excited to be joined by two very special guests.

Firstly, from **Microsoft**, we have **Dr David Rhew**, who is the Chief Medical Officer and Vice President of Healthcare.

And from **HCLTech**, we have **Dr Sandesh Prabhu**.

He is a Senior Vice President and head of the life sciences and our healthcare practice. Both are experts. They're, innovators at the front of this industry.

And importantly, both practitioners, you know, they both understand this, both from what we do with patients and and actually, as you know, as, as doctors say, I think there's a, you know, that's really important in this conversation.

So before we really dive in, **Doctor Rhew**, you could just introduce yourself a little bit about your role.

**Speaker: Dr. David Rhew**

1:45

Thanks Andy.

It's a real pleasure to be here.

My name is David Rhew, I'm the global Chief medical officer for Microsoft.

I've been in healthcare technology for the past 30plus years.

I'm a physician, I'm a technologist, but I'm also a health services researcher.

That means I am very curious about how the technology improves health outcomes.

I want to understand is it working?  
Is it creating value?  
Is it having an impact on people's lives?

And so much of what we're focused on today is not only the development of the technology, but the implementation and demonstration that this is actually going to lead to value and ultimately transform healthcare.

**Moderator: Dr. Andy Packham**

2:25

Awesome,

Thank you.

Dr. Sandesh, a little bit introduction from yourself and a bit about the role.

**Speaker: Dr. Sandesh Prabhu**

2:33

Sure, absolutely.

Thanks andy.

My name is **Dr. Sandesh Prabhu**, part of the life sciences and healthcare business leadership team here at HCLTech.

In my role, I lead what we call as industries, solutions and practice teams across the globe, you know, covering all of life sciences and healthcare segments responsible to build solutions to address customer pain points, you know, bringing all the business and technology together.

Very passionate about technology.

You know, like Doctor Rhew, I also trained as a physician, but you know, got on the technology wagon and really looking forward to this conversation, how technology and business come together and make a difference.

**Moderator: Dr. Andy Packham**

3:17

Awesome, thank you.

I'm set up to kick off I'm yeah, we, we talk a lot about AI and we talk a lot about the future. And I want

to get that into that a little bit later in the conversation.  
But yeah, we've been building on technology for a long time.

There's a lot of legacy and legacy sometimes is holding us back and it's causing problems.

So I kind of like to explore, you know, how do you go about thinking about the modernization of technology and the modernization of in a way that actually was going to start driving value very early in that conversation.

So, David, if you want to kick off with that

**Speaker: Dr. David Rhew**

3:57

Yeah, sure.  
You know, I think legacy has both value and it can be helpful in certain ways, but it also can be problematic.  
Clearly, organizations are used to where they store their data, they're used to the work flows, they're used to deriving value out of the legacy systems.  
But the problem is these systems don't traditionally talk to each other and so the data ends up becoming siloed.  
You can't take advantage of some of the newer things like artificial intelligence.  
But the good news is that we actually have a mechanism to be able to help bridge the gap between legacy systems and be able to enable us to be able to do things and that is really through the cloud.

So if we think about the cloud as an enabler, allowing us to be able to potentially migrate data into the cloud, apply AI, we have an ability to be able to transform the current processes leveraging cloud. But at the same time, in some cases, we may want to store the data in the legacy systems, but manage and apply the AI outside of that.  
And so we're starting to see platforms that are cloud enabled, such as like Microsoft Fabric would be a great example where you can enable data to reside where it's at, but at the same time use the metadata and ultimately apply the AI on these different data sources to enable us to be able to take advantage of some of the newer technologies.  
So I think it's a balance that we have to achieve.  
You know, obviously there's a migration process moving towards a, a more modern platform, but at the same time recognizing that it does take time and there are opportunities to be able to take advantage of AI even in the transition.

**Moderator: Dr. Andy Packham**

5:39

Yeah, I think you're right.

Yeah, there is a lot of value and it's not just legacy in technology, but you know, we may have all processes and skills as well.

**Speaker: Dr. David Rhew**

5:49

Absolutely.

You know, I think one of the things that we see today is that we are so set in the way that we've always done it that when we're introduced to these newer technologies, we often times think, you know, how does this work within our existing workflows?

It may be better that we actually pause and reinvent.

You know, there's a great saying by Henry Ford, if people ask me like what they wanted, they wanted a faster horse.

Well, we actually know now that we have an ability to be able to do better than just getting a faster horse.

**Moderator: Dr. Andy Packham**

6:23

No, absolutely, **Dr Sandesh**, you must be having so many conversations with customers about this point.

What's their big challenge?

**Speaker: Dr. Sandesh Prabhu**

6:35

So I think, you know, people centric challenges are the biggest challenges if you ask for right.

I think, you know, the chain management aspect of it in terms of, you know one, getting people to learn the newer technologies at the same time, you know, transition out of the legacy, you know, the lot of training that needs to happen, the learning of the newer systems.

I think, you know, that's where a lot of risk is being ascribed to, you know, when you look at modernizing in that sense, in addition to everything else that we are talking about, right.

But at the same time, I think the, you know, some of these very interesting best practices in healthcare.

If, if I were to talk about from the recent past, I think, you know, there is a lot of ask for partners to step in and help with these modernizations because they want to, you know, kind of preserve the bandwidth of our, you know, their, their own in house teams for, for the modernized side of the things.

You know, as the newer technology adoption takes shape, you know, while, while you need people to, you know, kind of make sure that the legacy migration is more seamless.

So that's where you know, partnership is very key.

You know, as we have seen with some of these modernization aspects, the last one and probably the most important one in my view is the importance of the user experience, as we, you know, kind of get to the more modern world from a technology standpoint.

So both the user interface experience and **Dr. Rhew** talked about the workflow optimization that comes with it.

I think, you know that, that's very key and that's where we are seeing a lot of customers investing heavily in addition to all the technology, you know, shifting on the right side, if that makes sense.

**Moderator: Dr. Andy Packham**

8:35

No, that's that perfect.

And I think one of the things you've focused on again, it's the people element.

So in this transformer as well as the technology, it's really key that we do this, you know, thinking about how we're going to use all of this, you know, this incredibly sensitive data, how that's going to be used responsibly.

How are we making sure that we, not just think about the, the, the safety and the security of the data, but the safety of the patient as we go through all of this innovation and change?

So, **Dr. Rhew**, let's start with you again.

Just how, how do we frame all of that legacy modernisation in that in, in a framework for making sure that we're doing that in a responsible way?

**Speaker: Dr. David Rhew**

9:15

I mean, I think it has to start with the data security.

Right now, data security is foundational for everything that we do.

And if you feel like you have a platform that secures the data that enables us to have privacy controls around this, those are the types of things that will immediately deliver a level of sense of of trust in terms of how this process is being run.

But on top of that, especially with the AI models, we have to recognize that there's more to it than just simply creating a secure environment.

We have to understand how many models or which type of models that we have running within our system and what they're actually doing.

So like doing an inventory, a registration process of your AM models, we need to know whether or not those models have actually been tested on data sets that are representative of what we are looking to do.

A lot of times we rely on third parties to provide us with the data models.

But ultimately, they've been tested on data sets that may or may not represent the ones that we're talking about when we deal with patients and other types of data.

So that's a very important element.

And that's just before deployment.

Now we're also talking about post deployment.

We need to do the same level of monitoring to make sure that the outcomes are expected and continue to be consistent.

There's something called drift, where AI actually over time changes and it may actually result in diminished or decreased performance over time.

So we do need to monitor post deployment and not just model the models, but also monitor the outcomes associated with that and monitor their in different populations, which gets to the really the third, I guess the next area which is very important, which is assessing for bias in those models.

What we often times find is that the buy the models themselves are reflective of the data sets and they may not necessarily have that same approach looking at other types of models and then how it's applied in a workflow.

Sometimes the application of these leads to decisions that we are unexpected.  
And then you don't know that unless you actually start monitoring and looking at how they're deployed.  
So biases are very important and then streamline governance.  
You have to do this in a way that doesn't require a lot of people spending time monitoring every single model.  
And that is where we've been at for quite some time thinking about.

But as we enter this next phase, this next generation of AI with the Agentic AI, we're going to have to double click on that and do the exact same thing for Agents and understand how we manage it.  
All these different agents that are doing all these different amazing things.  
So it's an extraordinarily important but also rather complicated process.

And I think right now organizations are just starting to realize that it's more than just simply, I'm going to buy a piece of software or an AI and implement it.

I actually have to do something to make sure it's working well within my own system.

**Moderator: Dr. Andy Packham**

12:19

David, just staying with you for a second.

Can you just talk a little bit about responsible AI and, you know, certainly how Microsoft have been driving and driving this. We are, I think it's seriously important. And you know, we've been partnering with Microsoft in this space.

**Speaker: Dr. David Rhew**

12:33

What Microsoft has internal processes that we've been using for quite some time to do everything that we've talked about to ensure the safety, privacy, transparency, fairness.

And there's a lot of different tools that we use that we've been enabling our clients to utilize.

So the internal processes ensure us give us the confidence that when we launch products and capabilities that our clients can take full advantage of that and have confidence in what they're using.

But at the same time, Microsoft has been working with our partners and our clients to be able to help them put in the processes to be able to become able to govern the AI and be able to apply things that we just talked about.

And so it's really both internally and externally where Microsoft has been leaning in with responsible AI.

**Moderator: Dr. Andy Packham**

13:21

Yeah, I think that's key.

Doc Sundesh, how do you go about a little bit about people management or change management?

Again, you know, how do you go about having a conversation about explain ability or responsible AI with actually the clinicians themselves?

We, you know, we're used to talking about that from a technology perspective, but how do you go about in in kind of a way that you work, talking a clinician or a medical practitioner through what we're doing?

**Speaker: Dr. Sandesh Prabhu**

13:53

Absolutely.

I think the most common question is and this is something that we need to clearly articulate and clarify to our healthcare professionals is the difference between ethical AI and responsible AI and how ethical AI is part of the responsible AI.

Think that's a very common question that we get right.

So how, is each of them different from the other, right?

This second important element that we have seen is in terms of, you know, the explainability that you talked about.

I think that's the most crucial aspect of the responsible AI in my opinion, when it comes to healthcare, especially the ability of us explaining, you know, the use cases, the benefits to clinicians as well as to patients.

I would answer patients in that bucket, right?

So that in addition to transparency, that's a very critical component.

And I think in many of our experiences, the oversight committees that include healthcare professionals as well as patient representatives have played a very important and critical role to ensure that explainability and that acceptance and adoption.

Hence, you know, on the, on the floors when it comes to the AI tools, you know, be it as part of the workflows or, or by themselves, I think you know, those, those have been some critical components

At HCLTech, right? You know, just just to extend on that, all the solutions that we are building for healthcare using AI, we have our own responsible AI council that first ensures that you know, we are adhering to those guidelines of responsible AI, making sure that there is transparency, there is explain ability, you know, explained, I mean documented and delivered in as much detail as a clinician and patient would look for.

And that has been one of the major levers of our engagement with our customers, especially in healthcare and life sciences that has that has enabled us to push some of these good solutions into production in a way that otherwise wouldn't have been possible.

So I think responsible AI and all the tenets of that responsible AI that is very key, especially, you know, when it comes to clinicians and their acceptance of these tools.

**Moderator: Dr. Andy Packham**

16:28

Awesome, Thank you.

We've spoken a little bit about kind of legacy and the migration and and this is this is always incredibly dangerous.

But I'd like to get your views about what's the next maybe **5-10** years going to bring up.

Yeah, I promise in 10 years we're not going to come back and see how accurate you are in almost inevitably when you do this, you know, things, things happen either much, much faster you expected or much slower.

I'd love your views on kind of what, what's, what's it going to look like maybe in five or ten years time, you know, if I turn up at a hospital, what's, what's going to be very, very different for me.

17:11

So David, do you want to do you want to start with that and then we'll see what?

**Speaker: Dr. David Rhew**

17:14

Sure.

Yeah, you know, I think one of the things that we're seeing right now today is that there is a tremendous interest in AI.

There has been a significant number of use cases that have been validated and deployed.

Ambient voice is probably the one that is most widely used.

There are so many great use cases today of using the ambient voice to capture the information that is described in a patient encounter and then brought into the form of a note that can be helped used for clinical documentation.

But we're starting to go beyond that where voice as a platform could be used for many other things that would all be part of that encounter.

And we're starting to see ambient computer vision as well.

So we're many different ways that ambient is becoming integrated into workflows.

Of course, there's a tremendous interest in applying this for improving operational efficiencies, revenue cycle management, engagement with patients.

And to me, those are what we see today as just definitely great opportunities and things that will continue to advance.

But what I'd love to be able to see is that we focus on also the big picture items that oftentimes are things that we would not have thought could be addressed with AI.

Things such as how do we accelerate the research path so that we can make these discoveries?

How do we enable organizations to be able to improve access to care, access to affordable healthcare for individuals?

How do we address the rising healthcare costs?

And so these are big problems that often times we don't think AI has a role or as a big role.

But I'll give you an example of 1 initiative that we have launched with some partners across the country and the US as well as internationally.

And it involves the AI applied on a retinal image to identify disease conditions starting with diabetic retinopathy.



And this is something called **Oculomix**. We've known about this for well over a decade. It is significant amount of advancements where we can have a high level of confidence that we can make these diagnosis and identify biomarkers for everything from diabetes to heart disease to kidney disease to ophthalmologic and neurodegenerative conditions.

But the issue has always been workflow and the workflow, it took about 20 minutes for a physician to be able to capture this image.

Clinicians often times needed to dilate the eyes of patients.

This wasn't reimbursed.

So all these workflow issues which have now been resolved, AI, it does it in an automated manner.

It's 2 minutes, it doesn't require dilation and there's a CPT code for reimbursement.

So we now have an opportunity to do what I call create these **doc in a box** type of technologies that you can bring anywhere in the world and democratize care.

So this is something that we're really excited about because we're now starting to realize that AI can do some amazing things for organizations that we could never have envisioned before.

**Moderator: Dr. Andy Packham**

20:22

Awesome.

And yeah, I think that doc in the box, that whole idea of being able to, I think the key thing for AI is it activates, it does it's, it's not about kind of how we automate what we do today, but what we actually could do that we can't do today.

So Doctor Sandesh, what's your, what's your vision for the future like?

**Speaker: Dr. Sandesh Prabhu**

20:43

Yeah.

20:44

So I think, you know, in addition to everything Doctor Rhew mentioned, right, so there are a couple of areas that we are seeing a lot more uptake thanks to AI. 1 is the high performance compute and you know the acceleration that it is driving in the research side of it, right.

We are seeing a tremendous interest.

I mean high performance compute has been there for some time.

It's not new, but you know with the with the advent of AI now we are seeing a lot more interest and investment coming in.

And so I'm expecting a lot more research investments augmented, accelerated by AI.

The second important area is also the AR.

We are taking a newer Avtar with AI.

So we have been, you know, involved in some of the proof of concepts, you know, that bring ARBR together with the AI and the kind of possibilities, you know, be it in terms of remote operation or digital surgical platforms, you know, that enable you to intervene remotely.

Or, you know, even in situations like neuromodulation, you know, you, you are actually controlling, you know, epileptic seizures sitting in, you know, completely on the opposite end of the world and in, in seconds that used to take, you know, literally a couple of hours of sitting to just adjust somebody's, you know, modulation.

Now it happens in seconds, right?

So and you know, though it, very simplistic, but we have to put it in a context, you know, there are only few people who can actually do that in the world.

And, you know, AI is going to multiply that number and you know, the efficacy and the, the, the pointedness of that and and more people are going to benefit, you know, over a period of time.

So I think, you know, the, possibilities in, in the areas like that, where we are pushing the envelope in a bit.

I, think, you know, AI is going to be our best friend, you know, pushing those boundaries and the way that we are seeing this evolving is also very interesting, right?

So the investments, you know, the agent AI we talked about.

So there is, there is a lot of I mean, we have already moved from, you know, generative AI to agent AI. I'm pretty sure there's something else waiting for us, you know, around the corner.

But Agentic take has taken to the next level.

I mean, today we are talking about very low hanging use cases like regulatory submissions with agents, you know, compliance document preparation with agents. But you know, imagine us being able to do that.

You know, we talked about doc in a box, you know, you know, whether that doc in a box is a combination of how many agents is the real question.

And you know what, what we're also already seeing is this agents coming in.

And obviously, you know, there are other boundaries that we need to define, but there are agents, you know, which can potentially replace doctors, at least for the primary care in some shape and form.

While replaces is a scary word, but you know, at least the majority of the, you know, the access part of it, especially in the rural parts of the world where the access is a big issue.

I think AI is going, AI agents are going to redefine some of those equations that that's how I see the future, you know, primarily in remote care, access to the highly specialized care and then, you know, augmenting the overall workflows in the clinical settings.

**Moderator: Dr. Andy Packham**

So I mean, that's fantastic, that's a fantastic picture.

But one thing I've learned with AI is actually it's hard work implementing.

It's, it's not, you don't flick a switch, it turns on and starts doing all of this.

So Doctor Sandesh, just stay with you.

How you know, a partnership and working together, you know, the, the, you know, the great, the great partnership we have with Microsoft and with HCLTech and with customers.

And like, what kind of, you know, thoughts or recommendations would you give to an organization that's beginning this process of modernizing and thinking of implementing AI across their, you know, their organization?

**Speaker: Dr. Sandesh Prabhu**

25:13

Yeah, I think, you know, it's a partnership game.

If someone wants to achieve all the benefits of AI in its fullest form at the shortest.

The simple answer is partner ecosystem.

And many of our customers already recognise this because the technology is evolving so rapidly.

Not everyone has all the pieces.

So they need, we, we need to, you know, kind of lean on each other to bring, to get all those pieces and put them together right.

So I think partnership is very, key, more so than ever in, in a field like AI.

And you know, we, work for example, very closely with Microsoft.

You know, what we are able to do is get Microsoft's technologies, put our experience and expertise on the domain and other fronts and the technology obviously and bring it to life for our customers through use cases, the proof of concepts, MU, PS and so on and so forth in record time, right.

And that we are and similarly, you know, with that expanding on that we are able to bring the cutting edge aspect of these technologies to bear through the lab ecosystem that we have established with, with Microsoft and other partners, right.

So what these labs are help us do is get the customers build, I mean, basically, you know, drive the innovation in a joint innovation construct model, you know, baking the pain points and come out with solution options, you know, that are accelerated by these technologies.

So I think that joint innovation in partnership with, you know, different technology and the domain and the services partners, I think, is the big, I would say anchor point for someone who is looking to make real progress in the AI world.

So I think you know that that's broadly how I would put it that day.

**Moderator: Dr. Andy Packham**

27:24

Yeah.

Thanks. David.

Yeah, I mentioned earlier, you know, that we're a responsible AI part with Microsoft.

How do you see this partner model evolving?

We spoke about 5-10 years.

How do you see the way that partners will be working with Microsoft evolve over that time period to continue to drive value?

**Speaker: Dr. David Rhew**

27:43

Yeah, people get very excited over the technology, but what they really care about are the outcomes.

You know what they care about.

Did this result in improved efficiency?

Did this result in increased access, improved safety?

Did patient satisfaction improve?

Did we increase revenues?

That's what people care about?

And, often times there's an assumption that the technology leads to the outcome, but there's a there's a very critical middle piece and that is implementation because it's how you implement the technology, how you customize it, how you localize it, how you decide the workflows, how you bring it to life, how you build the infrastructure that supports that and then enables that to work within legacy systems and non legacy systems and how you build a road map.

Those are the types of things that ultimately determine success or non-success.

You can actually take the exact same technology and have different implementations and get different outcomes.

And that is something that we're now realizing.

It's very important that we not only appreciate the role of implementation, but also who's implementing it.

And we've been working for many years with HCLTech.

And you know, I can tell you that I personally working with Doctor Prabhu and his team, they get it.

They totally understand the value that can be created and how to do it.

And we've been working closely with them to be able to create the implementation of these technologies, everything from the development of the infrastructure to development the workflows and deployment across the entire ecosystem.

We're talking about providers, payers, pharmaceutical companies, life science companies, Med tech.

And that has been something that has been very important for us.

And so as organizations think about the future, they would love to be able to just take the technology and implement it themselves.

But often times these are more complicated, the issues that require a partner.

And so we're all in on partnerships and we find that working closely with certain partners that understand the Microsoft technology, understand clinical workflows, we can deliver on a better outcome.

**Moderator: Dr. Andy Packham**

I think for me, I mean, the most exciting bit of this conversation is we have focused so much on talking about outcomes, you know, how that benefits the clinician, the doctor, how that's how that's done responsibly.

And I, think, you know, for me, in the next 5-10 years, we will almost in a way not be IT companies anymore, but we'll be companies that drive real, real, measurable value for the people who use all of that.

And that's for me, that's super exciting.

That opens up something that I just think is amazing.

So look, final thoughts, David, if you start any final thoughts

**Speaker: Dr. David Rhew**

Yeah, well, as organizations start moving towards this new world where AI, agentic AI becomes a part of their strategy, their implementation, their approach, I'd say three things that they should be thinking about.

The first is that it's important to start small, get value and be able to start getting some experience. But let's not forget about the big ticket items that can be addressed with AI and some of these issues that we're dealing with, we may be able to address the big ticket as well as a small ticket item. So that's the first thing.

The second is AI does not work without some level of governance. And as especially as we get into agentic AI, you cannot have a whole bunch of agents running around doing different things with someone not being involved. We found that collaboration both synchronously, asynchronously on a platform such as Microsoft Office and Teams creates an incredibly important, valuable opportunity. And there are many tools that allow us to be able to inventory the agents, that allow us to be able to put access control, understand the life cycles. And these are the types of things that we're moving towards, AI governance and agentic governance.

The third is it requires a workforce. As much as we think that it will replace humans, this has to be managed by humans. And so we have to upskill the individuals so that we understand how to use AI in a capacity that may be different than what we're currently doing. And so this desire to upscale our entire workforce and build a pipeline of talent that comes in with the understanding of how this is done, that is something that will need to be done not only by healthcare organizations, but by the broader communities, including educational institutions and other organizations.

**Moderator: Dr. Andy Packham**

32:28

Awesome.

Doctor Sandesh, just closing thoughts.

**Speaker: Dr. Sandesh Prabhu**

32:31

Sure, I would choose partnership of all.

I think, you know, the partners make things happen.

I think you know, we talked about joint innovation, we talked about scaling things from one to the other end.

I know I'm just piggybacking on a couple of things that Doctor Rhew mentioned.

You know, having that scaled trained resource pools, I think partners can bring in a lot of value and having that thought process in the very early on adoption journey to get the right partnership ecosystem in place for customers is very, very critical.

The 2nd and you know, most important thing, which is again links to what David talked about

governance is to have a very robust government system that is driven by the right over side committees that give right importance to the ethical side of the AI, the responsible AI part of the story, while also ensuring and making sure that the patient safety security concerns are addressed optimally, while also ensuring the right level of explainability.

I think that's very critical.

So I know I'm bundling many things together there under that point.

But last but not the least, I am very bullish on Agentic AI personally.

And for me that has the potential to change the way we operate.

Our operating models are going to change.

We, were talking about Uberisation.

We were, we are now heading into it where we are now talking about agentization.

I don't know that that's a word altogether, but basically we, we, we across the, across the industries expect us to be dealt with agents at every, at every interaction.

So I think Agentic AI has a lot of potential.

It has already started giving us very good outcomes in some of the initial pilots that we have implemented.

I'm personally very, very bullish about Agentic AI and the possibilities that it brings and its ability to bring other technologies together and make it work better.

### **Moderator: Dr. Andy Packham**

34:53

Awesome, thank you.

I you know, agentic architectures are going to change the way that we think about not just technology, but the way that we think about work.

But you know, the, the key and and you're both covered this so many times is the governance around it, the responsible AI around it, the making sure that we've, we know what those agents are doing.

It's certainly life sciences.

It's not a free for all.

So you know, I'm, I'm super excited.

I think it is going to cause us though, to need to think and re skill dramatically, not just in technology, but in the way that, you know, we think about the way that we work.

So both of you, thank you very much.

This has been just an awesome conversation.

I've really enjoyed it.

Just to kind of to wrap up, there's there's lots of research.

There's some really interesting papers from Microsoft and by HCLTech.

We'll post some of those in in the link along alongside this.

So everyone, thank you very much.

36:16

Thank you.