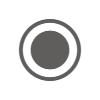
**UvA Interview with Marten Hillen-20250317\_153623-Meeting Recording**

March 17, 2025, 2:36PM

32m 58s

 **Pija Chmieliauskaité** started transcription

 **Pija Chmieliauskaité** 0:03  
No. OK. So let's begin. Let's begin. So as we know, people's is multifaceted issue and has lots of new ones and lots of little details that ones have to pay attention. When looking at the topic.  
I would like to begin by asking if you could briefly introduce yourself and explain how did you begin your journey with PFAS.

 **Marten Hillen** 0:29  
So I asked you to do the same and and and share once more the objectives of your study so that I have to completely clear.  
Is there so many of your team?

 **Pija Chmieliauskaité** 0:40  
I don't think so. I don't think so. Either we will.  
Just if it's like cheap or yeah maybe I think.  
So sorry. OK. So we will be, would you like us to explain the purpose of our project?

 **Marten Hillen** 1:00  
I will answer this question of course, but just to make it completely clear.

 **Pija Chmieliauskaité** 1:03  
OK.  
So basically we are creating, we're trying to create a digital intervention which aims to help companies in the industry.  
In industries such as PFAS's producing industries.  
To find up and come up with alternative solutions, also ways in which they can reduce their emissions or mitigate the effects they're having. So we're creating a digital intervention, which we will introduce later on the interview. We don't want to mention it right now, so we don't.  
Influence your answers, but it's we are we are doing this interview to get a bigger insight inside of the how PFAS's industry works so we can make it as good as possible.  
I can't mention too much before we begin the interview because it might influence your, your your answers, but this is the basic idea.

 **Marten Hillen** 1:59  
It's no worries.  
OK, be quick, but I'm doing myself so I'm a civil engineer by training from Delft University of Technology, specialised in coastal engineering and coastal risk production, that was roughly 15, 16 years ago, when I graduated, and I worked a lot internationally almost only in the water sector. So I've been in the water sector for a long period of time, originally in flood risk reduction and resilience of sorts, and you can probably find something about that if you wanted to, but I've worked in New Orleans after Katrina, New York, after Sandy and a lot in Asia helping out governments defining safety levels. Roughly 8-9 years ago I moved to the US where I switched fields a little bit and was responsible to introduce a water technology to the sector. Over the past few years, I came into contact with new technologies surrounding PFAS and removing those chemicals from water as it was becoming more relevant in the water sector and then, less than half a year ago, probably five months ago, I left my job with a large engineering consultancy firm to go and start opening that start up at the potential to make a very significant impact and still continue to improve the environment and communities.

 **Pija Chmieliauskaité** 3:48  
OK, wonderful.  
And.  
How exactly did you choose? Did you become the joining with PFAS specifically and coming up with the the Weaver Labs itself?

 **Marten Hillen** 4:02  
Oh, maybe good to explain. I'm not the founder. I'm the person that's leading it. And then two other founders. One of them is a professor of chemistry who essentially looked at the PFAS challenge from a chemistry point of view. He was looking at the water sector and not understanding why people would apply.  
And certain technologies were essentially used in the status quo doesn't make any sense from a chemistry perspective, perspective, or let's say a molecular level, so to say.  
My journey came in via people that were backing this as angels, so Angel investors that knew of my role and skill set and you should talk to them. I think it would be a good match and I did my due diligence and had interviews with everybody involved in the company. I thought it I could really make a difference here.

 **Pija Chmieliauskaité** 4:49  
Mm hmm mm hmm.

 **Marten Hillen** 5:06  
And help tackle this challenge, so in depth it would be fairly recently. From the company's perspective, what we do is take a new approach that's much more effective and comprehensive, it covers everything from long chain, short chain and ultra short chain. We can remove that from water really efficiently and have something that's regenerable so we take an approach that is most effective at the molecular level.  
At this point I can explain you the chemistry behind it. That's probably not needed for your interview.

 **Pija Chmieliauskaité** 5:45  
No. Yes, it's not a must for us. So you've already kind of touched upon this, but what would you think what would you say are the key challenges when working with PFAS's?

 **Marten Hillen** 5:56  
The challenges would be that I think it's still OK, I'll try to zoom out and then you can decide whether that's helpful or not. I think it's fascinating to think of PFAS as a problem that's incredibly large, which people find very challenging to comprehend. You've noticed probably in society that is hard for people to understand, something that goes beyond their imagination. So if you think of PFAS, it is literally everywhere, right? We've contaminated part of the environment; it's in our bodies, yours and mine. That's hard to understand the scale of this, the incredible magnitude. If you look at some of the recent studies, there was one for Europe by a group of journalists and experts that puts the clean-up fee in just per year in almost close to a trillion dollars. It's very hard for people to understand to put it in these kind of contexts at the same time.

 **Pija Chmieliauskaité** 6:54  
It's massive.

 **Marten Hillen** 7:01  
We're talking about exposures that are incredibly small, right? Exposures at very small levels, parts per trillion which what you've heard is in this comparison before, but it's like a drop a droplet of water in 25 Olympic swimming pools. We're looking for the tiniest amounts that could get you sick. That makes it incredibly hard for people to understand. I think if I look at PFAS as well it is hard to see that it is everywhere in everybody's lives and then decide what decisions are we going to make to tackle this. You have a stakeholder map that all have different interests. We have, and you are probably working with some of the polluters and manufacturers that some of them will argue that, maybe rightfully so, that PFAS is essential in the way we live our lives these days.  
That you have on that on one hand. Then we have people that are getting sick or employers that have staff that get sick and they are in need of solutions. And the solutions are not that effective at the moment; there's a strong need for technological advancements and those things happen at the same time. You see that it's a very challenging and hard to understand topic.  
Then in that setting, I think there's an environmental need, that is hard to balance versus other environmental needs. We all want to drink clean water. We want to have a green environment, and it built at what cost, right? So we're at the point where we need to think of every dollar or every euro that needs to be spent. And how will that be spent to its greatest benefit?  
I would say it's very multidimensional. It's hard to comprehend at scale. It has many stakeholders that have competing and varying interest and we have limited funds to address something that's hard to pinpoint where that exactly should go.  
And that last bit.  
I'm an engineer. I also have a business degree, so I have an MBA.  
And somewhere in my mind I'm already trying to optimize how I would spend it. I think that may be relevant, but it's that's also very challenging for people to do because it's where you are going to spend a dollar right in front of you.  
Maybe as a contact so.  
I urge you not to use that… I know you're recording this, but please don't use this. But like yesterday I was messed up going through rubbles. I'm completely sure there would be toxic fumes and PFAS in there. And I don't have firefighting gear at home so I don't have that level of protection at that moment, even though I'm aware. And I make a different choice with my neighbours. Even if you have the knowledge, it's hard to make these decisions.  
And you wonder like what? What was that the safe choice? Was that a logical choice? Probably not. Right. But I still made the choice when it was right in front of me.

 **Pija Chmieliauskaité** 10:42  
Of course, yes. But like so, still inside of this context, how do you think working with PFAS will evolve in the near future? Then take it into account all of this? How do you think this PFAS business will change and evolve?

 **Marten Hillen** 11:00  
I'm gonna give you pathways.

 **Pija Chmieliauskaité** 11:04  
OK.

 **Marten Hillen** 11:05  
Sorry if this is not like that, I don't have a one-step solution. So how I wanted to involve is that people are putting this.  
How I would like this to involve is that people are putting this into the right context. We recognise how significant this is and we try to make logical decisions.  
For example, I'm very happy that there's a drinking water rule in effect in the US, but that only covers 6 different compounds. There's much more, and we need to balance what is effective there.

 **Pija Chmieliauskaité** 11:42  
Mm hmm.

 **Marten Hillen** 11:43  
And for example, what I think is probably upcoming is that you've probably heard about the build trust short chain like TSA, DFA is also everywhere. It's the most found PFAS compound in Europe, so probably will also hold for the US.  
And green refrigerants that are used in data centres that are being built everywhere, right. So even though they don't have a warming effect, they will, those compounds will breakdown in TFA that will then rain down on the communities.  
So DFA is the two shortest kind of PFAS chain, that there is unregulated at the moment, probably toxic. We don't know, but it's everywhere again. I hope that there will be a balanced kind of outcome, then I think there's going to be a very complicated legal battle going on. You can kind of see that some of the producers are already following certain playbooks. We get a lot of the industry saying like, oh, but we don't know whether there's a straight line between all those illnesses and what we've done.

 **Pija Chmieliauskaité** 13:04  
Mm hmm.

 **Marten Hillen** 13:06  
To me, it reminds me a little bit of what the tobacco industry was doing, right, so that's not helpful. But that's also going on and some of everybody argues that whatever they do is a critical or essential use of PFAS. We need to be mindful not to cost that net not too wide, right.  
We cannot eliminate it all, that's not what everybody's up to. But so that's another path of path that needs to be somehow controlled and evaluated and then lastly we see particularly here in the US, there's quite some outrage in communities that are impacted quite significantly. They are actually taking action, working with utilities that is of interest to us because we feel like these have a far better shot at getting comprehensive solutions because they're not giving up. It doesn't really matter whether there's regulation, they will take care of it.  
And that is great for now and it's helpful for these communities. It cannot be an overall solution because not everybody can just be outraged and then demanding that things happen in their community, because then we don't get a nice overall solution of sorts, right? So all these things need to be balanced so we get to the multiple stakeholder problem.  
And then you like somewhere in the middle between these last two is the European approach that that will first focus more on the polluter side of things, I think that's also what you're trying to do versus the American approach that's much more on the receiving end of it, where they say we will control the element that is most significant exposure to citizens, right, while the polluters at this stage are free to continue.

 **Pija Chmieliauskaité** 14:47  
Mm hmm.  
That's on that topic. How do you see regulations around polluters evolving? What do you think they should look like? What are your expectations?

 **Marten Hillen** 15:18  
I think regulation will mean a great deal in this respect.  
We cannot leave this completely to the sector.  
Because then in the sector, I mean industrial producers of sorts, all of them will argue that whatever they do is essential and that's not going to work. I think there is going to be incredibly challenging to find a balance. But I would like to see more of the health professionals involved and saying what is the largest likelihood and then make a decision on what objectively is essential versus non essential right. And we're getting close to it. But you can see that there's illogical approaches to it. France did the ban of sorts, but they left out cookware completely. Probably very French, but also very strange. I don't understand that because I would not argue that that is essential.  
So I would like to see coordinated regulation. My biggest hope is that the EU has a short at doing that. If they rely on a consortium of scientists. I know it's incredibly unpopular these days.  
But these larger teams could be potentially effective, right?

 **Pija Chmieliauskaité** 16:55  
Yes. Yeah.

 **Marten Hillen** 16:56  
I'm not saying that that will happen, but I'm hoping that some of that actually happens to have some impartial outcome.

 **Pija Chmieliauskaité** 17:08  
Moving on towards more of the polluter ends and how and how the industry's movement and functioning and looking, how it's going to work.  
What do you think? Are some of the business considerations behind the reduction or the changing of PFAS? Well, I think a business as you also have a business masters.  
Goes through in order to change and stop using PFAS or do something about it.

 **Marten Hillen** 17:38  
Give you a cynical answer here. I think in the moment that it hits their bottom line or their actual revenue or profits or shareholder maximisation, that's essentially if I want to summarise my MBA in one word, it would be like learn a language how to optimise shareholder,  
Profits.  
That's going to be the key differentiator, and that is often guided by regulations, if they just have to.  
But you can see particularly a current trend here in the states is that they say like, Oh well, look if it's all the freedom that that we can potentially take and we'll make the best decisions for you. I doubt that it's essentially true.  
Also, our company has very strong values and a vision that is also rooted in community and the fact that we have stewardship as one of our values. I might not be the right person to ask that to, but I think that's the key obvious driver. What we.  
potentially see is that the more communities realise where this is coming from, the higher likelihood that these some of these companies will be held accountable.

 **Pija Chmieliauskaité** 18:50  
Mm hmm.  
So you think that the?

 **Marten Hillen** 18:59  
Whether that will happen I can I can say.

 **Pija Chmieliauskaité** 19:05  
So your company has advertised to companies who want reduced PFAS, or how would you place yourself in a state as a stakeholder in a situation?

 **Marten Hillen** 19:18  
So we help address the PFAS contamination crisis, so we can our technology essentially works for municipal clients as well as industrial clients and a whole range across the water sector. We can actually go into biotech, a platform technology. So we can modify it depending on its application. Given that we're a start-up, our initial focus is to go there where there's a direct need and a direct market because we're still pre revenue, as in I have a technology I'm not currently selling it. I'm positioning it to be able to sell it. Does that make sense?

 **Pija Chmieliauskaité** 19:52  
Mm hmm.  
Yes it does.

 **Marten Hillen** 20:01  
OK. Yeah, no. If you don't understand what I'm trying to say, just be it's OK and just ask. We can work, we can work very well with the industrial sector to help to remove PFAS from their effluent or production process.  
We also have some ideas on how to potentially recover or reuse that a few years from now, so we've tried to be a solution provider that actually helps to address this.

 **Pija Chmieliauskaité** 20:37  
So.  
Just because we're running a bit out of time, I will quickly phrase these next questions.  
We are trying to develop a website which is our digital intervention.  
In a context of trying to get to how to hold companies accountable for their PFAS emissions. However, we are not trying to do this to punishing them. We're trying to allow them to show us their efforts and to brag to other companies and other people in the industry, how they are the ones they're doing the most, doing the best and positioning themselves in a good light. Do you think this would be an efficient way to motivate companies to reduce their PFAS emissions?

 **Marten Hillen** 21:34  
Mmm… don't ask a yes or no question to me.

 **Pija Chmieliauskaité** 21:38  
I don't think yes or no, but like.

 **Marten Hillen** 21:38  
I would say no, I applaud the effort and it will be interesting to see in what kind of context this works and what kind of context it doesn't. There are certain companies that are going out there quite aggressively and with a very positive note on. We are doing this because it's the right thing to do. You probably saw like Patagonia had a like a 5-minute clip of sorts. We already knew that they were doing it, but it also fits their brand. It fits whatever they do.  
Pretty short that a lot of the chemical producers won't do it at that level and if they do, it's the… It will be interesting to see if you can rely on them providing a kind of platform of sorts and seeing whether that's actually what they do.

 **Pija Chmieliauskaité** 22:32  
Mm hmm.

 **Marten Hillen** 22:34  
I live in Oklahoma, we have a very strong oil and gas.  
And producers, and they're all round. I'm bombarded with commercials about that I cannot live any life without fossil fuels, right? Like they have literally this commercial, where everything around you would disappear from your phone to your house.  
This doesn't make any sense, but it's like if I leave it up to them, they could essentially put something on the website go like, ah, we're taking care of this issue.  
The question is that whether that's actually true. Let's put it this way, it could be a valuable part of an overall strategy if there's actual data sharing, and if you get some of the key parties involved, the challenge would probably be for you to get those parties involved, right? Because they don't want to spotlight on them.

 **Pija Chmieliauskaité** 23:33  
Mm hmm.

 **Marten Hillen** 23:41  
And even though they may get a lot of value out of it, it will be challenging to convince them. If you ever attended talks of, let's say, people in the Metal plating or carpet mills or landfills and stuff.  
The water conference I've been to, they’ve sent lawyers for their sessions, so we get the very different kind of representation, right. And they in a discussion they would ask like, OK, let's turn this around. They would ask the attendees like, what would you do to remove PFAS from your life?  
Which is kind of like, nonsense to go like, if I would go like, all right, we all deal with climate change, which commute would you stop to combat climate change?

 **Pija Chmieliauskaité** 24:39  
Yeah.

 **Marten Hillen** 24:41  
Not a helpful contribution, so maybe I'm too cynical in this, probably case studies is more helpful than championing the companies. Because the companies or it's going are going to be hard to evaluate what they are doing is actually effective or truly the best they can do.

 **Pija Chmieliauskaité** 25:05  
Very, very interesting. We heard this.

 **Marten Hillen** 25:05  
Very long answer as I was trying to collect my thoughts.

 **Pija Chmieliauskaité** 25:09  
So we have heard this comment of case studies many times for other or other interviews. It seems that there is a general belief, at least in the industry, that case studies are more would be a more efficient way of telling and convincing rather than just letting companies tell us what they're doing.  
So we don't want to really waste a lot of your time and we have allocated, we ask you for 30 minutes and the 30 minutes have passed. We just wanted to ask you if you have any other questions you'd like to ask or some last remarks you'd like to add.

 **Marten Hillen** 25:44  
No, not necessarily. I have a few more minutes if that helps. I'm just checking my phone. I can. I can still stay on for another 5 if that helps you a lot. If you had outstanding questions.

 **Pija Chmieliauskaité** 25:59  
So yes, actually, yeah, I would. I do have one question that I think would be quite useful is one of the concepts that we've been playing around with in terms of how to put in our website is the idea of.  
Having companies such as Weber Labs in it as well to give alternatives to the industry and kind of like not advertise, but advertise these other ways of solving the issue. Do you think this could be a helpful thing and something that could further collaboration or would?  
Your company such as yourself, feed not one associate with such a thing such a website.

 **Marten Hillen** 26:38  
So as long as it's no sponsorship, I think it could potentially be helpful.  
It would be interesting to see there's a couple of these market intelligence agencies out there. Maybe you've seen them at the Aquatech, but like global water intelligence or blue tech, they are trying to map what's going on in the water sector in terms of PFAS solutions. Then you have conventional absorbance granule activated carbon and ion exchange resin that we would argue are not that effective. You have the selective or tailored absorbance or novel absorbance. We would be a part of that. There are some in the field. There were pretty confident that we have a great solution there, but you need multiple of those and then you have some other technologies like phone fraccination. This is all in the removal side.  
You will have these kind of clusters of how this is being addressed that would probably be more interesting. When people point out like oh, but this cannot be addressed or this is not a viable solution, then you can point at technological advancements across the sector.  
That would already be helpful. And there's more and more external resources that validate. The fact that we won an award.

 **Pija Chmieliauskaité** 28:01  
OK.

 **Marten Hillen** 28:10  
And that we were pre-selected by a jury helps, and you'll see, and that doesn't only hold for us that holds for other companies too. I think that would be helpful otherwise you could get the potential remark that this also looks biased to some extent. I would rely on any external setting where you could see like hey there are  
Solutions and no modern solution or more advanced solutions are being developed.  
See here and here and here, because that'll tell that would actually help us in a sense that.

 **Pija Chmieliauskaité** 28:44  
So how?

 **Marten Hillen** 28:49  
We often, if people will go like yeah, but then this is the best we can do. We would argue that it's absolutely incorrect, right, that needs to be no.

 **Pija Chmieliauskaité** 28:59  
So that's just to summarise more or less what you said, if correctly, you will so would not if it works with sponsorships could not work because it would transmit untrustworthy and.

 **Marten Hillen** 29:10  
Oh, it could. It could work, but it will impact the way people perceive your website or your tool.

 **Pija Chmieliauskaité** 29:17  
OK.  
So this would be more based off recommendations where we can simply kind of say the best these are the options out there and here are some examples of the best options.

 **Marten Hillen** 29:29  
I would say work with external parties that can plug in. These are the top categories that are happening. Look at these and these and these and then you can almost in a case study kind of way, say these are companies in this range. These are companies there, these are companies here; so that there are options available.

 **Pija Chmieliauskaité** 29:48  
OK.

 **Marten Hillen** 29:52  
Right. So that saves you from saying like ah, you have problem A out of the first part of our website here is solution C that will solve it, because now you're providing A almost a kind of judgement, you've now expanded your scope a lot. Because now the question will be. Would your group of students be the right one to position to do a complete technical evaluation?

 **Pija Chmieliauskaité** 30:14  
Mm hmm.  
Of course, of course.  
So, OK, we would have to get an external party kind of perspective in order to be able to.

 **Marten Hillen** 30:32  
And a lot of that is available.  
That's what I'm trying to say, so that don't make that too much.

 **Pija Chmieliauskaité** 30:37  
Yeah.  
OK. Yeah. Thank you so much.

 **Marten Hillen** 30:42  
Is this helpful at all?

 **Pija Chmieliauskaité** 30:44  
Very, very helpful, yes.

 **Marten Hillen** 30:44  
Oh. Oh, OK.  
Start with so global water intelligence, these guys are really, really good; Blue Tech, I think also pretty good.

 **Pija Chmieliauskaité** 30:57  
OK. We will definitely look into them then.  
I think that's it then.  
Do you have any questions you'd like to ask? No, really. But it has been very helpful. Thank you so much for your this interview and thank you for your time and hopefully.  
The disaster is happening in Oklahoma and with the fires.

 **Marten Hillen** 31:22  
Yeah, we'll see how it goes. It's fascinating. Like I left the neighbourhood and there were camera crews and the police is patrolling. It's just it's just a very surreal kind of setting. And then at some point I just also had to leave. I'm in the office because like otherwise I won't be able to get stuff done.  
Talk about resilience. It's it was a very harsh transition from one to the other. And so now I appreciate that at some point, if you make progress or are there something you want to share? I will definitely have a look.

 **Pija Chmieliauskaité** 32:03  
Definitely.

 **Marten Hillen** 32:04  
Because that that would be interesting to us as well.

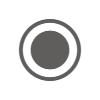
 **Pija Chmieliauskaité** 32:08  
Once we get closer to a final product, which will be around just before June, we will send you an e-mail and we will.  
If you can give us some feedback if you'd like and also see how everything is.  
And if we do decide to include some.  
Involvement from the other part of the industry, the ones that are trying to come up with solutions, we will let you know see if you'd like to participate.

 **Marten Hillen** 32:34  
Excellent. Alright. Well all the best and the best of luck to you.  
And keep it up. I wish you all the best in your project.

 **Pija Chmieliauskaité** 32:42  
Expect an e-mail from us before June, just before June 1. We'll share you the link to our website so you can take a look perfect.

 **Marten Hillen** 32:48  
I look forward to it. Thank you.

 **Pija Chmieliauskaité** 32:50  
How much? Thank you.  
Bye.

 **Pija Chmieliauskaité** stopped transcription