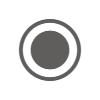
**Interview with C. Jonker-20250314\_140628-Meeting Recording**

March 14, 2025, 1:06PM

44m 40s

 **Pija Chmieliauskaité** started transcription

 **Jonker, M.T.O. (Chiel)** 0:07  
Still recording, I started.

 **Pija Chmieliauskaité** 0:09  
So you can repeat what she said before.

 **Jonker, M.T.O. (Chiel)** 0:11  
And I mentioned that this recording will be deleted after you've used it for. What is it the report? Yeah. So delete it as soon as possible.

 **Pija Chmieliauskaité** 0:19  
Yes.  
Yeah, sorry.

 **Jonker, M.T.O. (Chiel)** 0:26  
OK, go ahead.

 **Pija Chmieliauskaité** 0:29  
Let's get it started.  
First of all, we want to understand your maybe understand a little bit more about what you do. Can you introduce yourself a little bit more?

 **Jonker, M.T.O. (Chiel)** 0:46  
What I do?  
I do a lot of different things, but I think you refer to my activities in in the PFAS field.  
I work for the Utrecht University. I work at the Institute for Risk Assessment Sciences IRAS and I am an environmental chemist. I talk to a lot of people about PFAS to students, to citizens, to ministries, to colleagues to people working for different companies, etcetera. The reason is that I happen to know something about PFAS, I guess, and it's hard for me to say no. So that's why a lot of people want to talk to me, I guess I don't have all the answers, but my rationale is that, you know we have different people that know things, but let's try to combine all the knowledge that we have. And if I can contribute something with some of my knowledge, that would be nice.  
So yeah, what do I do in terms of PFAS.  
I do some research myself in the lab, but let's not discuss that. What is more important, I guess for you, is that I'm active in, let's say society or something. I collaborate with, for instance, XXXX. So that's the Dutch National Water Board.  
But also with the inspection and different other actors, just trying to help them with the data analysis on PFAS or knowledge in terms of behaviour of the chemicals and effects; what do these chemicals do in the environment? How do they end up in our drinking water? What are the standards that we should use? Are we at risk? You know, all these things related to environmental chemistry and toxicology actually as well?

 **Pija Chmieliauskaité** 2:55  
That's very interesting. I also want to mention what you said that you really want to help us. That's actually one of the main reasons that we approach you. We contacted you because I need, I think your knowledge is going to be very helpful for us.  
So one of the first questions that we have is.  
How do you think PFAS should be dealt with?

 **Jonker, M.T.O. (Chiel)** 3:29  
That's can you specify the question? Because in the lab, in the field in our food, in terms of regulations, in policy, or how to approach companies. So it's a, it's a very broad question.

 **Pija Chmieliauskaité** 3:46  
Yes, I think the purpose of this question is to understand your broader perspective on PFAS's. So generally what is the perspective on it?

 **Jonker, M.T.O. (Chiel)** 4:00  
Still a difficult question.  
Well, I'm. Let's put it this way. I'm one of the few people I think who says that we are in a PFAS crisis.  
And there's not many other people that call this a crisis. But I do see it as a crisis because it's something that's can have severe implications, but we don't know a way out yet.  
But anyways, the fact that I'm using the word crisis perhaps has enough.  
What has happened is that we, as human beings have all been sleeping while the industry has been polluting our environment and you know now we bump into the problem that these chemicals are everywhere and we get to know more and more effects, toxicological effects, but we don't know how to yeah clean the environment and actually there’s no way to hide for PFAS. Everybody's exposed and actually everybody's exposed to concentrations that are above the safe thresholds that are IVM, the Dutch EPA mentions so you can run, but you can't hide for PFAS.  
And I'm trying to spread at least that word. Perhaps trying to influence policy or politicians, and that's not very easy because they're all busy and they don't believe yet that this is a crisis.  
But yeah, on the same page you know it's not just PFAS, but there's also a lot of other chemicals. We as human beings are producing 100 thousands of different artificial chemicals that all, not all, but many of them end up in the environment. And I'm not sure where the story will end, you know, less than 100 years ago, we were all exposed to chemicals though, but only natural chemicals.  
But since let's say a couple of decades, we're exposed to a lot of artificial chemicals.  
And time will tell how our bodies will deal with that, but it's a huge toxicological experiment, you could say.  
I don't like that experiment. I like experiments, my own experience, but I don't like this experiment.  
But your question was how to deal with or how to handle it.

 **Pija Chmieliauskaité** 6:30  
Yeah, basically.  
How? If you think that there is any kind of solution in the near future, how we can solve this crisis that you mentioned?

 **Jonker, M.T.O. (Chiel)** 6:45  
Yeah, well, that's a difficult question because many people say that, OK, we need a ban on PFAS, well perhaps that would be very good because we do need to stop the emissions, because if we don't, you know, everyday tons of PFAS entry environment.  
But it's not easy to ban them because they are in in so many of our daily products and nobody wants to live without his or her, you know, cell phone, laptop or whatever. And I mean PFAS are in in so many different products. So it's ban will have huge implications and we need to think about if we really want to go down that road. It does perhaps imply that we need to say goodbye to, you know, certain products or certain consumer products.  
Or we really need to speed up with the process of looking at alternatives et cetera, but it's hard because these chemicals are quite interesting in terms of chemical properties.  
So yeah, a ban would be great perhaps, but then we should watch out that we don't replace PFAS with other chemicals that are just as harmful or even more harmful.  
And another thing to mention is that you know we're focusing on a European ban now of PFAS. You've heard of that, I guess.  
But in my honest opinion, that's not the solution, because we can ban the factories that produce PFAS, or we can bend the uses of PFAS here in Europe. But what will happen then? Well, production will just move to the US, certainly now Trump is in power or the production will move to China or India looking for new economic ways to boost their own economy.  
These chemicals are very mobile, so you know if all their production moves to China or whatever to Asia, then you know in a couple of months the chemicals that are emitted over there are in our North Sea so what we would need is a global ban of these chemicals and that's something that I'm afraid will never happen.  
So we're kind of stuck and that's not a nice message that I'm spreading here.  
At least for the next couple of several or many years, I guess that, that's, I'm afraid that's reality.  
Again, that's my opinion.

 **Pija Chmieliauskaité** 9:31  
I guess you have. Yeah. It's very valuable to hear you kind of already touched upon that, but I'm interested. What do you think? How does working with PFAS's evolve in the near future then, is there going to be any change or if there is going to be what kind?

 **Jonker, M.T.O. (Chiel)** 9:47  
Right, that'll be.  
Just a second, can you? I'm pausing you for a minute, yes.

 **Pija Chmieliauskaité** 9:55  
All right.

 **Jonker, M.T.O. (Chiel)** 10:50  
Just not a second. I got a visitor, so I just need to say one more thing and I'll be back, right?

 **Pija Chmieliauskaité** 10:56  
Yeah, no worries.

 **Jonker, M.T.O. (Chiel)** 11:57  
Please repeat what you just mentioned. You are a question because I'm in here because I was distracted by somebody coming in was an old colleague of mine, so.

 **Pija Chmieliauskaité** 12:09  
Alright. Yeah. So my question was you kind of already touched upon it, but how do you see then people's working with people's evolving in the near future? Do you see any change happening and if so, what kind?

 **Jonker, M.T.O. (Chiel)** 12:27  
Yeah, I do see changes happening.  
But yeah, there's different developments. I would say one is the awareness.  
The awareness among citizens, but also politicians of the existence of PFAS and of the risks. And that's step one actually. We first need awareness and then there will be next steps.  
And one of them is, for instance, that you see, with drinking water companies, they are trying to remove PFAS from their product. So trying to safeguard our drinking water. So that's an end of pipe solution.  
It's a technological solution.  
And at the same time, there's aware awareness among organisations or agencies that have to look out for the quality of our environment etcetera. They are also trying to find the sources of PFAS where they leak into the environment and trying to close the taps, that's what you see happening as well, but all this goes very slow, I must admit.  
But still these are, you could say end of pipe solutions both of them.  
It's still not a ban.  
And also what you see is what is perhaps even creating more awareness. But there's investigations among groups of people I know, for instance, in Belgium trying to see what concentrations are that people are exposed to or concentrations people have in their blood, so you know it's taken more seriously and that's a good thing.  
You also see much more research going on PFAS, on the toxicity of different chemicals, So what are the effects that we can expect?  
You see many epidemiological studies, so where are PFAS in, or what are concentrations in human beings, and how does that correlate with effects in the population?  
And there's also a lot of research on ways to break down PFAS. Can we break it down? Is there an approach that we could use to get rid of the chemicals and that's very challenging because these are extremely harsh chemicals.  
So there are many developments in in this field. And I'm forgetting a lot like, OK, people are searching for alternatives, of course just a few.  
Does that answer your question a little bit?

 **Pija Chmieliauskaité** 15:42  
Yeah. Yeah, it does. And.

 **Jonker, M.T.O. (Chiel)** 15:44  
OK. Again, because the questions are are broad and the answers can be extremely broad. I mean we can talk about this for many hours, but we shouldn't.

 **Pija Chmieliauskaité** 15:56  
Yeah, but actually I think your answer just asked to the kind of our next.  
Topic of concern that it's about regulations.  
So.  
What? What do you think about? Like, what should be the curse of?  
The PFAS regulations, like in the political way to show companies that OK, we have to do something or reduce people submissions.

 **Jonker, M.T.O. (Chiel)** 16:31  
Regulations, you mean?

 **Pija Chmieliauskaité** 16:33  
Yeah.

 **Jonker, M.T.O. (Chiel)** 16:35  
OK. Should there be regulations that force companies to stop whatever doing things with PFAS?  
Well yes, because if we don't stop, well, at least there should be regulations that force companies to stop emitting, discharging PFAS and there's still a lot of things that are unknown that are uncertain and there are many companies that work with PFAS, but they don't even know that they're working with PFAS because PFAS are in many products.  
And yeah, you have to be a chemist if you want to understand what's in your own products. Because if you produce something, well, just a simple example. You know, if you.

 **Pija Chmieliauskaité** 17:34  
I think maybe you turn off your microphone by mistake.

 **Jonker, M.T.O. (Chiel)** 17:39  
Oh, so I gave an example about paint.  
Not many people know that there can be PFAS in paint, and if your paint producer, I'm not sure if those people know that they are mixing PFAS in their product. Sometimes perhaps, but perhaps not.  
So if you don't know what you are using as ingredients in your own products, then then you don't know if you're discharging something that's not permitted. Also there we have to create a lot of awareness, so there should be awareness among producers of all different kinds of products, what are you using as ingredients in your own product?  
So regulations are good, but because there's not enough awareness among the companies, we need to do something else first. We need to find out the streams of PFAS. So now you have big companies like 3M that are producing PFAS. But what is their market?  
Where do all the PFAS that they produce? Where do they go? That's something that we need to map 1st so we can, you know, get a view onto which industries exactly do these chemicals go? And of course, we know a lot already, but there's also many intermediate suppliers. And the companies are using codes instead of names, chemical names. It's not very transparent and because of this lack of transparency, we're still sometimes in the dark.  
But regulations, unfortunately, are needed to force companies to do something or to don't do something. That's unfortunate because it would be great if companies and people would just do the right thing.  
So yeah, do we need regulations? Yes, certainly.  
But they should be backed up by more knowledge. You could just place a ban, but for something like this? That's not perhaps not the way to go.  
Anyway, perhaps a vague answer, but again, it's difficult.

 **Pija Chmieliauskaité** 20:11  
Yeah, that's understandable.  
What do you think are the most?  
Accurate ways of measuring PFAS's plan because I know this is also a problem of, you know, even detection of people's.

 **Jonker, M.T.O. (Chiel)** 20:30  
Yeah, well, that's an interesting question because.  
Because the standard way of measuring PFAS in in water and soil, in blood in eggs, is with LCMS, that's an chemical analytical technique. Not sure if it rings a bell, but it's laborious and it's costly.  
There are other ways that focus on, let's say, some kind of total fluorine determination. I'm collaborating with a company that does quick measurements.  
You know, within a couple of minutes, you can have an answer, so that's interesting.  
But so if I go back to LCMS, then you focus on specific chemicals and there is a problem because if you're just measuring 15 different chemicals, or 20 or 50, we know that we are dealing with many thousands of different PFAS and depends on your definition of PFAS, there can even be up to millions of PFAS.  
And it's impossible to target them all in your analysis. So that means that perhaps we need some kind of total determination of organic chemicals in which there is fluorine.  
And there are methods for that, but they are not very robust yet. So if you are really asking what's the best way to measure PFAS.  
If you focus on individual chemicals like PFOA, PFO or LGNA, then LCMS is a nice approach, but it's low and expensive.  
But if you want to map the full exposure of human beings and the environment, we need to focus on much more because there are so many chemicals under the radar.  
And that we can never capture them all in with a chemical-analytical apparatus.  
So we need total measurements, but these are fake as well because what does such a number of total fluorine sense?  
That's an interpretation question that's difficult.  
But it's true that you know the only standard way of getting rid of PFAS at this point in time is to burn them. That's what XXX, for instance, in Antwerp, does. So they have huge ovens in which they burn materials that contain PFAS.  
But the temperature is about 900° and many people doubt whether this temperature is high enough to destroy PFAS completely and personally. So there might be many byproducts during this combustion process and we don't know which these chemicals are. They end up in the environment, but we cannot measure them, still we are exposed to these unknown chemicals. There are many unknowns and that's what makes this crisis even more scary, I would say.

 **Pija Chmieliauskaité** 23:51  
OK. Thank you for your answer.  
Then we have the next question that will be what tools and strategies do you think will facilitate reduction of commissions?

 **Jonker, M.T.O. (Chiel)** 24:05  
Can you come a little bit closer to the to the mic? Because it's sometimes difficult to hear you.

 **Pija Chmieliauskaité** 24:10  
Sorry, with tools and strategies, do you think could facilitate to reduce speed for submissions?

 **Jonker, M.T.O. (Chiel)** 24:20  
Which tools and strategies are useful for?  
Reducing PFAS emissions.

 **Pija Chmieliauskaité** 24:30  
Yeah.

 **Jonker, M.T.O. (Chiel)** 24:30  
Is that a technological question?

 **Pija Chmieliauskaité** 24:33  
Yeah, it's more like a technological question.

 **Jonker, M.T.O. (Chiel)** 24:37  
You're focusing on end of pipe solutions.  
So that means it's. It's out there, there's an emission already. Now we can reduce those emissions or closing the tab. I think that we should really put more focus on the streams of PFAS, where do they go and how can we reduce the emissions by dealing in a better way with the waste. I mean, if it's in the wastewater already.  
It's difficult to get it out.  
So if you want to reduce emissions in terms of technological solutions.  
Yeah. Then there's not actually not many methods that that we can use. I mean if you have a wastewater stream, you can run it through activated carbon, but then the PFAS will start to activate the carbon, and then you will have to burn the activated carbon at very high temperatures.  
That's one, but the other thing is that not all the PFAS stuck to activated carbon. You know, some of smaller molecular weight pass through activated carbon, so they will end up in the surface water anyway.  
You have techniques like reverse osmosis, but these are very expensive and only work for some lower concentrations and that's a technique that drinking water companies apply.  
But you don't destroy PFAS that way, you end up with a very concentrated waste stream and that waste stream is just discharges discharged in a river downstream of the intake point of the drinking water, and then for the rest, you know, the entire world is searching for technologies to destroy PFAS, including myself.  
But I'm not going to give a lecture on that on all the technological approaches. I mean you can look that up perhaps in the literature.

 **Pija Chmieliauskaité** 26:49  
What about more social strategies in terms of, I don't know, motivating businesses to change, to switch to alternatives or any other ways to reduce their emissions.

 **Jonker, M.T.O. (Chiel)** 27:03  
Yeah. Then again, one you need knowledge with the companies, knowledge that they are actually using PFAS themselves. Well first, actually step one is awareness that we might be using PFAS, you know or anyway PFAS is being used by many different companies. Then two knowledge at specific companies that they know that they are using PFAS and then I'm sure that many companies are willing to reduce the use of PFAS.  
They would like to do so, but then the question is, are there alternatives? Or are we, as society willing to accept products as consumers that are not as good as we are used to from the age that we were using PFAS. I mean, if you go back to the Middle Ages, they were still, they were also people living in this world and 100 years ago people were also living in this world, but they didn't have computers and cell phones et cetera. But still we could live. But yeah, we don't want to go back to that time that we cannot Teams anymore and then.  
You know, just in going back to this example of paints, for instance, if I'm painting my house, it's great that the paint is very smooth. But would I settle with a paint that is not as smooth in its application as a paint containing PFAS? Can we as society live without PFAS?

 **Pija Chmieliauskaité** 28:50  
Alright so.  
OK. So you would say that?  
Companies that would perhaps know that they're using FAS and there was an alternative that was, I don't know, maybe more expensive.  
Companies would willingly choose that option.

 **Jonker, M.T.O. (Chiel)** 29:11  
If the customer wants to pay for it, then sure, why not?

 **Pija Chmieliauskaité** 29:15  
OK.

 **Jonker, M.T.O. (Chiel)** 29:16  
I mean, the people at those businesses are people as well and it's all about making money for industries and business people. But if they don't lose money, I guess it will be OK for them, but the thing is indeed that alternatives will be more expensive, or the product will not be as good as it used to be, and that's not something that companies will agree with probably.

 **Pija Chmieliauskaité** 29:47  
I think that's a good.

 **Jonker, M.T.O. (Chiel)** 29:47  
Now ask yourself, ask yourself the question if you would have a company.  
This this is all about looking in the mirror sometimes.

 **Pija Chmieliauskaité** 29:54  
Yeah.

 **Jonker, M.T.O. (Chiel)** 29:55  
I mean, you're using, you're using makeups. Well, if it would not be waterproof, you know, and you're using non waterproof makeups. You're riding your bike in the rain and it trips all over your face. Would you accept that?

 **Pija Chmieliauskaité** 30:03  
Yes.  
Yeah, I understand what you're.

 **Jonker, M.T.O. (Chiel)** 30:25  
You know these very simple questions. You know you can ask yourself these things because the waterproof mascara, you know, sometimes it contains PFAS. It is great because you know, if you're crying or you're riding your bike in the rain, it doesn't go off. Same for shoes. Are you spraying your shoes?

 **Pija Chmieliauskaité** 30:49  
Yes, yes.

 **Jonker, M.T.O. (Chiel)** 30:51  
Yeah, my first reaction always is stop doing it because these sprays contain PFAS, you know, and then to protect yourself then my suggestion would be at least do it outside not to expose you, but then problem is moved to outside. Then you're spraying outside and then your garden is full of PFAS.  
Are you willing to not use this spray on your shoes anymore so that your shoes can get more easily wet and dirty?

 **Pija Chmieliauskaité** 31:25  
Yeah, that's an interesting question I think.

 **Jonker, M.T.O. (Chiel)** 31:28  
These are simple questions. You know at the very low level, but there are many, many, many, many more of these questions at higher levels.

 **Pija Chmieliauskaité** 31:28  
Then.

 **Jonker, M.T.O. (Chiel)** 31:37  
So think about it.

 **Pija Chmieliauskaité** 31:39  
Yeah.  
What do you think the way about going about these questions at a larger scale is like because you know, even if I individually can't choose to not use those anymore?  
Do you think that like at a broader scale as a large society, we can move towards that?

 **Jonker, M.T.O. (Chiel)** 32:04  
Yeah. Well, again, the PFAS is a complicated problem I think we need all the actors in in our society, including civilian citizens now, if we all choose not to use certain products anymore, then the markets crashes and there's no need to produce certain products. So we as a society could stop. We have the power to stop the production of certain at least applications of PFAS.  
If you as women, and perhaps some men as well, would all stand up in the entire world and say we don't want PFAS in our mascara and our lipstick anymore, you know, then the application of PFAS and lipstick mascara will just stop because nobody will buy these products anymore.  
But it's not as simple as that. You know, when I'm asking students when I'm giving a lecture who's willing to stop spraying shoes, then many people say, OK, but there's also always many people that say no, I don't want to stop it because I don't want my shoes to get dirty.  
So it's impossible to get all the people on the same page and refuse to use PFAS, students in Amsterdam and you are aware of societal challenges.  
But many other young women don't have your education level where they don't know, even if they would know perhaps they wouldn't care because they don't care about the environment or whatever. In that respect, we do need regulation. Politicians or the government should do something because if it's up to society, we will never, we will never solve this problem. Led back to your question. Do we need regulations? Yes, absolutely.

 **Pija Chmieliauskaité** 34:04  
I think this is a good way. A good place to bring our intervention here because we're working on our website. The target audience is PFASs producing companies.  
And we're trying to employ different strategies to persuade companies to change their production or employ more sustainable.  
Practises in PFAS production.  
What do you think could make such a website effective? Or do you think it can be effective?

 **Jonker, M.T.O. (Chiel)** 34:44  
Can it be effective? That's a good question, if you're making a website which is intended to be used by companies producing PFAS. Yeah, why would these companies? Well, they first need an alternative. You know, there you have it again, they there should be awareness that there are alternatives. First of all again they know that it's harmful to produce PFAS, but here's also the question what is PFAS? Because if you're talking about PFAS producing companies.  
3M, Chemours. That's just the tip of the iceberg. 3M is producing chemicals like PFOS and Chemours in Dordrecht is producing PFAS. Yes, everybody calls it a PFAS producing company but it's more complicated, companies produce Teflon. It's a polymer, a plastic and by definition, Teflon is a PFAS, but it's not the PFAS like we're talking about when we're talking about PFO and PFOS and Gen X, et cetera, because the polymer is something that's completely different.  
But I always tell people it's just give me a piece of Teflon and I will just swallow it here because it's not toxic.  
And so there's a distinction between PFAS and PFAS. If you're talking about polymeric PFAS or plastics, then they are not that harmful except for the fact that they are forever chemicals. The problem with Chemours is that in their production process of Teflon, is that they are using Gen X and PFO, these are small molecular weight individual chemicals that are more risky chemicals, I would say.  
And so if you have a website and you put it on the desk of the CEO of Chemours, if you what do you want them to do? Stop producing Teflon?  
What is PFAS and what is it that we don't want in our society? I mean for Teflon, it’s very useful material. The problem is when you are producing Teflon, that's a very polluting activity.  
And Chemours says that they have been looking for decades for an alternative to Gen X and PFO in their production process, but they cannot find it. So back to the question, are we asking Chemours to stop producing Teflon or stop using Gen X or PFO like chemicals in their production.  
Process. I'm not sure if you still follow me, but it's more complicated than most people think. And then you have a lot of other companies. They somehow use PFAS and sometimes they don't even know PFAS is in their products.  
Yeah, if there's an alternative. Again, I think that companies want to switch, but they are still not many alternatives.

 **Pija Chmieliauskaité** 38:55  
Yeah, that's I think very relevant. The idea that we like we have right now behind our website is transferring the concept of duty of care into the field of PFAS, so the companies have imposed on them as a legal concept that they have duty of care and the website will act as a best practises kind of showing best practices. Do you think that will be useful?

 **Jonker, M.T.O. (Chiel)** 39:35  
Best practise?

 **Pija Chmieliauskaité** 39:37  
And that's what we're trying to find out, yeah.

 **Jonker, M.T.O. (Chiel)** 39:41  
I mean, that's that. Yeah, that is the question. But what is the best practise for a company?  
Best practise in using chemicals in their product, or best practise in how to clean their wastewater or or waste gases?

 **Pija Chmieliauskaité** 39:59  
I sort of best practises in the sustainability sense and.

 **Jonker, M.T.O. (Chiel)** 39:59  
Is it technological?

 **Pija Chmieliauskaité** 40:07  
In possible you said that there are no much at this moment, but maybe showing possible alternatives that they are ready or also could be the the thing that you mentioned about cleaning the waterways.  
So we were wondering kind of your opinion about this, if you think that could be useful and also about we are still.  
Hesitating about who is going to be our specific target audience within the companies because you also mentioned before that there is the financial aspect and the sustainable aspects. So there could be.  
Friction, yeah.

 **Jonker, M.T.O. (Chiel)** 40:58  
Absolutely.  
Yeah.

 **Pija Chmieliauskaité** 41:01  
You have any insights?

 **Jonker, M.T.O. (Chiel)** 41:03  
But what I mean, it's easy to say on a website that people have a duty of care and should do the best they can, but if you don't come up with solutions, people often won't know what to do.  
So you need to come up with solutions. It's not enough to say you have to go to alternatives or something because you know companies are not going to spend time on searching for alternatives themselves because it costs them time and money.  
And the only thing they want is making money and not losing money. The problem is because PFAS are in so many different products, perhaps we need a lot of alternatives for different applications.  
We need a lot of research, and again, that will take a lot of time. If you say just you do the best you can then many people think, yeah, I'm doing that already.  
So you need to come up with specific suggestions I guess, and the question is, are those available now in terms of technological solutions, like what is the best available technique for cleaning wastewater?  
For example, Chemours proclaiming they are using the best available technique and that's filtration over activated carbon and then incinerating that in first factory in Antwerp, but there is an alternative solution. If they would implement it in the factory in Dordrecht, they would be bankrupt because it will cost them 100 millions euros.  
But they're keeping their mouth shut, of course, because they’ll lose a lot of money.  
So.  
And also technological solutions. Yeah, we're not there yet because to destroy PFAS is still very, very challenging.  
These are extremely strong chemicals and so it takes a lot of energy to destroy them.  
Generally, and yeah, that's there goes the profit, you know.

 **Pija Chmieliauskaité** 43:48  
All right.  
Yeah, I think your answers have been very insightful.  
And I think we should come to an end to not take any more of your time.

 **Jonker, M.T.O. (Chiel)** 43:59  
Yeah. No, but it's it has been an honor to me. But yeah, I do need to move on. I have another 5 minutes or something, but then, but it's a complicated. It's a complicated topic that you're dealing with, but I guess that's that's clear now.

 **Pija Chmieliauskaité** 44:05  
Yes.

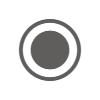
 **Jonker, M.T.O. (Chiel)** 44:16  
Because my answers were a little bit complicated here and there, I I assume.

 **Pija Chmieliauskaité** 44:17  
Yeah.  
Yeah, but I think they're definitely gonna be useful for us and help us direct the development of our project.

 **Jonker, M.T.O. (Chiel)** 44:25  
I could.  
OK, good.

 **Pija Chmieliauskaité** 44:32  
So I'm gonna stop recording now, probably.

 **Jonker, M.T.O. (Chiel)** 44:36  
I wish you all the best.

 **Pija Chmieliauskaité** stopped transcription