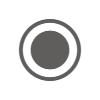
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 **Pija Chmieliauskaité**

 **Joana Saraiva De Barros Alves Caseir** 0:06  
Perfect. So maybe do you have something to say to add on to that?

 **Feifei Cao** 0:13  
For solving the problem, apart from the treatment part I mentioned, maybe I can mention another thing is because you know with PFAS monitoring in different medias like air, soil or water, it's not always easy because it cost a lot of money, of course. And you cannot monitor anywhere sometimes, so now they have all those kind of models developed based on the possible PFAS risk sites where PFAS can be released; for example the airports?  
Relevant industries and dry washing places for example. So with this kind of models it's kind of working well to predict the sites where PFAS be found in different medias, so I think it's kind of efficient to be used for the data-driven decisions for example.

 **Joana Saraiva De Barros Alves Caseir** 1:32  
OK. That's very interesting. We hadn't heard about that before. So thank you for that. And now here it's where we will come in a bit more. We are aiming to develop a website and with this website, we want to make it something that's actually useful. Not only that main, our main target audience is actually is industries and trying to motivate them and use this website for them to reduce PFAS emission. But we definitely want a collaboration with the academic side to ensure a more holistic view of the situation rather than just an industry focused view of the situation. So we wanted to ask you what kind of key characteristics would a website have that would motivate you. What would you want from a website that talks about PFAS and regulations and that would actually seem useful to you, and improve the tasks you have at hand with it.

 **Feifei Cao** 2:30  
You are targeting the industries.

 **Joana Saraiva De Barros Alves Caseir** 2:33  
Not only we, of course the industries is one of our focus, but we also want to make it useful for everyone, not just in the stream.

 **Feifei Cao** 2:48  
I mean, from my first thoughts, I would see that you could share.  
Both bad and good stories. You can share stories with sites that have severe contamination and which causes very bad incidents. For example, the case in in the Netherlands in Dordrecht, where they have this severe contamination and also people got sick and everything. And maybe if you can find any, you can also include some sites where for example, the industry has done something with their PFAS manufacturing or any treatment with measures reduced a little bit, even a bit the PFAS contamination and has some positive cases. I think it would be nice.

 **René** 3:42  
Yeah. And when it comes to industry, I'm always a bit fan of this idea of best practises.

 **Joana Saraiva De Barros Alves Caseir** 3:42  
Thanks.  
Yes.

 **René** 3:49  
And I am interested in that as well as a researcher, right? So I would be fascinated to hear from.

 **Feifei Cao** 3:52  
Uh huh.

 **René** 3:56  
From industry actors who think they've done something good, right, I'm not so interested in the ones who have done something bad. Not because I don't want to know. It's because I don't want to talk to them.  
But when it comes to people I'm interested in talking, I really want to know who is interested in fixing sort of the problems that they've have at their hand. It's also that many of these industries didn't know that they used PFAS and now they test their products and now that because of the delivery change is so long and it's not, everything has to be declared and everything.  
The way they start to tackle that-producer of medical equipment who found out oh, we have PFAS, but we also have to produce pacemakers. What do we do like? We followed our if it's a bit what Feifei said this something that works.

 **Joana Saraiva De Barros Alves Caseir** 4:48  
Mm hmm.

 **René** 4:49  
I mean a story of something that worked, but we followed our delivery chain back and we worked with our supplier on how to reformulate.

 **Joana Saraiva De Barros Alves Caseir** 5:02  
Excuse me. OK. And how would you so and how could we personalise this kind of ideas to your to your own needs as researchers? So what would make it easily accessible for you to know this kind of information? What's format would you think would work best?

 **René** 5:25  
Yeah. Story and the contact. The story, and then someone I can talk to when I have questions about the story that would be for me personally the easiest. Then you'd be doing my work.

 **Feifei Cao** 5:38  
Yeah, stories are good ideas. And also you can use what we call the geo-story.  
Something like on the map you can click on a site or location and then you open a story.

 **Joana Saraiva De Barros Alves Caseir** 5:54  
It's actually wonderful to hear guys say this because our website is basically what you're describing. Our ideas for our website is basically what you're describing. I will now go in a bit more detail to see if you have any other things that pop into your head as I'm explained. Feel free to interrupt me and say whatever you think is relevant. So the idea is there'll be a map you open and get into the homepage, there'll be a map; in the map, there'll be a river.

 **Feifei Cao** 5:55  
Yeah.

 **Joana Saraiva De Barros Alves Caseir** 6:19  
And there will be the river will be represented by a color of how well the industries that are connected to our initiative are doing.  
The idea is there'll be little houses or a representation of each industry, and each company connected to the river, and you can hover over the thing and you'll get some information about the company as well as some relevant stories and somehow they did it, what they did to improve their PFAS reductions, have there been improvements? What techniques have they used?  
And also we hope that they'll be willing to publish their papers.  
Like if they can have any kind of measurements, if they have measurements of it, we're hoping they'll be willing to also publish what is their emissions in terms of PFAS into the different types of water. So wastewater or into soil, depending on the industry, of course, most of them won't be able to give us an exact numbers, but we hope for an estimation and then there will be a forum where it will be consisted of the ideas being shared as well as stories and questions.  
And hopefully this is where we hope that there'll be more of an engagement from the researchers part and from academia side, where a company could go there and simply put a problem and researchers could, if they're interested in it, they could suggest ideas of how to solve it as well as get in contact with this company and either try to collaborate with them or other companies that are trying to sell PFAS, remove those things, could also try to get contacts through the websites.  
I thought there will be. I've also mentioned there will be a duty of care page where we would explain what are the best practises and what consists as good practises in terms of PFAS's and where we try to exemplify in almost as if we're talking to a 10 year old, ethically like what people like ethically what should be done?

 **René** 8:27  
And two things, one, if you get the companies to publish, how much PFAS they emit, then you'd be ahead of the people who whose job it is to monitor this, right? The authorities don't know this.  
So if you manage, amazing, I'd be surprised.  
And then it's a good idea to bring scientists and these companies together, but I'm a bit hesitant about the idea of having the scientists reach out to the companies because the companies could also just pay for that research.

 **Joana Saraiva De Barros Alves Caseir** 8:58  
Yes, of course.

 **René** 9:01  
And I think.  
There was this in the 80s in Amsterdam. This idea of the science shop where you could have research done by the university if you really wanted it and you couldn't pay for it, you could come to the university to design, shop and have that research done to you. So that was research done for human rights lawyer or for, I don't know, for an environmental organisation. So it sounds a bit like that only with companies they can pay.

 **Joana Saraiva De Barros Alves Caseir** 9:23  
Mm hmm.

 **René** 9:25  
And I as a researcher, don't really see it as my responsibility to reach out to the companies that know they're doing badly, and sort of out of my goodwill offer them what they could to be doing better if they want to ask me as a consultant, they can pay me a consulting fee.

 **Joana Saraiva De Barros Alves Caseir** 9:42  
OK.  
Hopefully, as the website evolves, we do hope to have some kind of model where we can contribute back into the people that help the website and help develop the ideas.  
But just as also, I think I didn’t explain that part too well. The idea is not necessarily the researchers are there to like, just give our ideas freely. It's kind of as a grounds to us to understand what are the problems give like because if companies that help each other kind of create a place where things don't have to happen in that website, but it's to create a place where things can start from and ideas can begin.  
Feifei, would you have anything that you would like to add?

 **Feifei Cao** 10:26  
Yeah, I think it's very ambitious to plan on getting data from industries on PFAS.  
It will be really nice if you can get some, but besides that, you can already collect some links. We've already had PFAS data, for example, from the Forever Pollution Project, and I know that for example, in the US, in Canada they have some platforms with a lot of PFAS data.  
You can provide these links on your website as part of I don't know, useful links or resources and you can also even gather some existed regulations from different places.

 **Joana Saraiva De Barros Alves Caseir** 11:01  
Hmm.

 **Feifei Cao** 11:12  
As I don't know as a toolbox or resources for people to consult, yeah.

 **Joana Saraiva De Barros Alves Caseir** 11:21  
So.  
We have also run into the problem of the industry not really being willing to communicate and talk to us. How would you approach this? How would you approach the industry when talking about PFAS?

 **René** 11:34  
They're really eager to tell you what they're doing well.

 **Joana Saraiva De Barros Alves Caseir** 11:39  
Pardon.

 **René** 11:40  
They're so happy to share what they've been doing to be better.

 **Joana Saraiva De Barros Alves Caseir** 11:43  
OK.

 **René** 11:45  
They're not in the business of setting problems, they're in the business of selling something that fixes something; this is what I found. And then and then to sound like the good guys is always amazing for them, right?

 **Joana Saraiva De Barros Alves Caseir** 11:58  
Yeah.

 **René** 12:00  
That's why I thought best practises is a good idea. Sharing their problems might sound like they're not ahead of the competition, which always every company wants to be.

 **Joana Saraiva De Barros Alves Caseir** 12:10  
OK.  
Very interesting, yes.

 **Feifei Cao** 12:17  
Yeah. I don't have much to say on what Rene said and also yeah, because for us we are always for example when we want to get data it's always from like national country monitoring programs or you know national authorities which are kind of not always on the same side of the industries and even on the opposite side sometimes.

 **Joana Saraiva De Barros Alves Caseir** 12:43  
OK.

 **Feifei Cao** 12:44  
Yeah.

 **René** 12:44  
Yeah, but have you spoken? So, have you spoken to companies?

 **Joana Saraiva De Barros Alves Caseir** 12:53  
A little bit, we have talked to come we've not been able to reach any companies directly. All of the companies we have reached have been through intermediary people such as during aquatech-I got the chance to talk to a lot of them-I talked to banks that work with companies that use PFAS's. I talked to consulting companies and I talked to sustainability consulting companies as well, but no industry itself. No person in the industry itself, of the production that have, I need to keep papers.

 **René** 13:28  
You found a bank that works with PFAS companies.

 **Joana Saraiva De Barros Alves Caseir** 13:31  
Yes.

 **René** 13:33  
They have a stand.

 **Joana Saraiva De Barros Alves Caseir** 13:36  
No, no, they don't have a stand. I was there in the Integrated leaders forum like so it was like a conversation, kind of more setting for water quality.

 **René** 13:46  
I was thinking I should should have gone there, OK.

 **Feifei Cao** 13:53  
Have you thinking about talking to industries, for example, that works with water or environment, which are kind of in risk because of PFAS industries.

 **Joana Saraiva De Barros Alves Caseir** 14:07  
OK.

 **Feifei Cao** 14:08  
I think they will definitely have another perspective for this.

 **Joana Saraiva De Barros Alves Caseir** 14:13  
OK. That's very, very interesting. We hadn’t consider that actually. So thank you for that.  
Do you have any anything specific in mind what industries to be at risk?

 **Feifei Cao** 14:28  
Yeah, I don't know. For example, like drinking water suppliers?

 **Joana Saraiva De Barros Alves Caseir** 14:34  
Mm hmm.

 **René** 14:37  
Yeah.  
Also water authorities. They're public bodies. They don't. They don't have to hide. They have no incentive to hide their problems.

 **René** 14:54  
And also companies that work for public industries. So Novart, for example, is an activated carbon producer. Well, OK, that's not a PFAS producer, but their problem is that they figure as an emitter, as soon as they start reactivating their carbon.

 **Joana Saraiva De Barros Alves Caseir** 15:12  
Mm hmm.

 **René** 15:12  
And that's a big problem for them because the PFAS links to the carbon and then the carbon needs to be reactivated, and then in reactivating, if they do that below a certain number of degrees, which is under debate scientifically and everything; but if they reactivate under a certain temperature, then they expel PFAS into the air, which makes them a polluter, even though they are engaged in cleaning PFAS from waste. So companies like that have really interesting problems, actually.

 **Joana Saraiva De Barros Alves Caseir** 15:40  
Very, very interesting. So we're coming up to the end of the time we had allocated for this. Do you guys have any last thoughts you'd like to share? Maybe come back to something else that was said before that you didn't have a chance to comment on?

 **René** 15:55  
And what's the duty of care?

 **Joana Saraiva De Barros Alves Caseir** 15:58  
So what is duty of care or what is the relation to us in the context of tree of care.

 **René** 16:08  
How do you use it? I know what it is, but it's how do you and what do you make of it?

 **Joana Saraiva De Barros Alves Caseir** 16:13  
OK, so well, did you OK is a a legal concept to begin with. And what we make of it is since the Netherlands is a place that has more focused in a community, a kind of solving problems rather than specifically targeting regulations to specific things, they usually seem to take an approach more of you do the best you can. You can do the best practises you can, so duty of care is basically what you were talking about best practices, is what are the best practises you can possibly do that are economical economically good for your company as well As for the environment? It's that you come where do these two things meet and where these two things meet is where you should be and if you are not where these two things meet you are not fulfilling your duties as a company and therefore you are going against duty of care and against the concept, and you can be liable for legal action because of that.

 **Feifei Cao** 17:23  
Guys just want to see I have to leave in about like 5 minutes because yeah, I have another personal.

 **René** 17:23  
Yep. Thank you.

 **Joana Saraiva De Barros Alves Caseir** 17:32  
No, no, no, don't worry. Yes.

 **Feifei Cao** 17:32  
Yeah.

 **Joana Saraiva De Barros Alves Caseir** 17:37  
Do you guys have any other questions then?  
Or anything you'd need to comment on. Duty of care or.

 **René** 17:41  
And.  
Yeah. And just because I spoke to a producer of PFAS and they're really unwilling to think beyond this idea of needing chemicals for certain applications, right? I mean you can. There was this moment that someone from bisf, German chemical producer.  
There was there was a round table or discussion and they were like, yeah, well, we can. We can think away from PFAS's. That's fine. We can use silicon for pans to make them non-stick and I said well, another way to make them non-stick is just to use cast iron, but then of course, they can sell chemicals, right? Duty of care only goes so much if you're speaking to a company, that's why I was asking. I mean you can have your duty of care next to economic good of the company, but the economic good of the company might be tied to something that's not very careful for the environment.

 **Joana Saraiva De Barros Alves Caseir** 18:30  
Mm hmm.

 **René** 18:46  
I don't know how to reconcile this and it's a problem I'm throwing in your direction. They can only do so much as a chemical company without suggesting that chemicals might be bad, which is something they'll never do.

 **Joana Saraiva De Barros Alves Caseir** 18:55  
Mm hmm.  
OK.

 **René** 19:01  
And yeah, I wonder what to do with that.

 **Feifei Cao** 19:04  
Yeah. And adding to that, I think it's again the issue of public awareness because if most people know that PFAS is not good, they will stop buying those products and it will also lead into the economic benefits of the industries and force them to find other alternatives or other ways to replace PFAS because people will not buy it.

 **René** 19:32  
Yeah, people will be offered it and if it's not regulated against people will buy it because they because it's seductive, it's really so good at what it does. I mean, I get annoyed when my eggs takes my pan right.

 **Joana Saraiva De Barros Alves Caseir** 19:46  
Yeah.

 **René** 20:04  
I have a bit of compassion for the consumer also.

 **Joana Saraiva De Barros Alves Caseir** 20:08  
Yeah.

 **René** 20:08  
And as long as it keeps being produced, the alternative might just not be better. Oh, sorry, as long as it's not tested, the alternative might just not be better than the PFAS. So I have a bit of I. Yeah, I don't believe in information as much as you do feifei, but that's fine.

 **Joana Saraiva De Barros Alves Caseir** 20:29  
But This is why we hold a focus group so we can both perspectives of the of the situation. So I want to thank you guys very, very much for participating with us in this group.

 **René** 20:30  
None.

 **Feifei Cao** 20:31  
Yeah.

 **Joana Saraiva De Barros Alves Caseir** 20:41  
Would you guys like to be informed of how our website develops? Would you?

 **René** 20:44  
Yes, yes.

 **Feifei Cao** 20:45  
Yeah, absolutely.

 **Joana Saraiva De Barros Alves Caseir** 20:46  
We will hopefully the first version of it should be done in June, so we would send it to you and if then?  
If you have any comments on it, you're always welcome to tell us and comments on how you think you could make it better, but we'll definitely use everything you've told us today and take it into consideration. So thank you so much and.  
You know, are free to do whatever you'd like to do.

 **Feifei Cao** 21:16  
OK. Thank you.

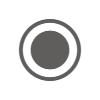
 **René** 21:16  
Thank you. Cool efforts.

 **Joana Saraiva De Barros Alves Caseir** 21:18  
Thank you so much. Bye. Thank you.

 **Feifei Cao** 21:20  
Looking forward to follow up, bye.

 **René** 21:21  
All right.

 **Joana Saraiva De Barros Alves Caseir** 21:23  
Bye.  
Wait, where do I stop? Transparent like here?  
I think that went well actually.

 **Pija Chmieliauskaité**