

Podcast - How to Hochschule VOICES



Show transcript

Prof. Peter Kisters

00:00:00: Hari: Welcome to How to Hochschule VOICES, the latest series from the How to Hochschule team. In this monthly bonus feature to the main podcast, you will find full length interviews, individual stories, and a collection of conversations with people from Rhine-Waal University of Applied Sciences, Kleve, Kamp Lintfort, and the entire Lower Rhine region.

00:00:30: Hari: In this episode of VOICES, a companion piece to our last episode, How to Be Sustainable, We meet Rhine-Waal Vice President for Research, Innovation, and Transfer, Professor Dr. Peter Kisters as he tells us about sustainability, the TransRegINT Project, and other related topics.

00:00:51: Prof. Kisters: Okay, my name is Peter Kisters. At the moment, I am the vice president at this university for research, innovation, and knowledge transfer. I grew up in exactly this region. I'm from here. I'm born 20 kilometers away from here. I lived in this region for, yeah, let's say 53 years now, almost. I was away for a few years, but then I came back because I love this region.

00:01:18: Prof. Kisters: I like to live here and all my entire family lives here. And that's the reason why I'm still here. Yeah. And in 2009 I got the information that there will be a university in Cleves and at that time I decided, okay, I have all the preconditions to work at a university. And then I applied for a job here and then I started working here in 2011.

00:01:42: Prof. Kisters: Now you said

00:01:43: Hari: 20 kilometers away from Kleve, what's the name of the town that you

00:01:46: Prof. Kisters: were born in? It's Uedem. Uedem. It's a small town . Okay. It's famous because of the motorway. There's an exit for the motorway. Okay. That's the only. Reason why that's the only attraction is that's the only reason why other people know it.

00:02:01: Hari: And what about your education? Where did you study? What did you study? And how did that lead to you having the position that you have right now?

00:02:09: Prof. Kisters: Yeah, I studied mechanical engineering in Bochum. Started in 1991. I wanted to be an engineer in the automotive branch, but in the end, I did something totally different.

00:02:21: Prof. Kisters: I started to work in the department for drives and drive systems and conveying equipment. And I did my studies there and completed it in 1996. And after that, I got the chance to do a PhD at the same university and did that. Yeah. And in 2001, I completed the PhD studies and started to work in a company a bit closer to Uedem again.

00:02:48: Prof. Kisters: Yeah. So I came back step by step a bit closer to Uedem. Aumund is a worldwide supplier of conveying equipment and cement plants. At that time, I was able to travel around the world for that company. I was responsible for research and development. I saw quite a lot of different cement plants all over the world, but I also saw the people living there.

00:03:10: Prof. Kisters: And. It was in contact with them and that was quite interesting from my point of view and, um, an international university as this university is, this international aspect is quite important and I, I thought, okay, this is something that connects me to that universities, to that international approach. And, um, at the same time they were looking for mechanical engineers and, uh, I was a mechanical engineer, hence it, it fits.

00:03:36: Prof. Kisters: Yeah. And I did this job as a professor until 2019. And then the president of the university asked me if I'm interested in doing this job as a vice president for research and transfer. And I don't know why he asked me, he talked to somebody else and that guy. Told him, ask Kisters us, and then he came to me and yeah.

00:03:58: Prof. Kisters: Okay. We, we had more or less same ideas and same perspective on this field, and then I started to work as a vice president.

00:04:06: Hari: And with your current position, what are your tasks and responsibilities?

00:04:12: Prof. Kisters: Yeah, as the vice president for research, innovation and knowledge transfer, I'm responsible for the support of the research activities in the university as well as the transfer activities.

00:04:24: Prof. Kisters: These are two of two columns of what we as a university have to do. There are in total, there are three that's studies teaching on the one hand and research and transfer on the other hand. So in total three, um, these two columns, research and or fields research and transfer are quite important because it connects the university to the region, to the companies.

00:04:50: Prof. Kisters: It enables our scientific staff to work in fields that are state of the art that are, let's say, helpful to influence the future of all of us and especially the future of the region. And that is my task, is to support exactly that and to enable, uh, That, uh, scientific staff can concentrate on their research and their, uh, transfer without doing all the rest that is necessary to bring it on the street.

00:05:21: Prof. Kisters: And so, and, um, therefore we try to build up some structures, uh, try to, um, hire people that can do a certain, um, service, uh, for the scientific staff again and so on.

00:05:34: Hari: Okay. And, um, could you elaborate a little bit on what you mean by transfer?

00:05:37: Prof. Kisters: Transfer is, yeah. If our scientists work on a certain topic, in most of the cases, it's a bit tricky to get the knowledge they gain or the results out of the university.

00:05:50: Prof. Kisters: Sometimes they are contact to, to companies and, uh, and there is a direct, uh, transfer of knowledge, but sometimes it's, uh, something that is more. Um, important for society, for example, or for a certain branch of different companies in the end. And then we come into play because our job is to do exactly this step out of the university to communicate what the university is able to do. To communicate uh, results off, uh, research projects, um, to communicate, yeah, let's say investigations or analysis results that have been done, for example, in the faculty of society and economics. So we have some people in the society itself are the people that are interesting to. to talk to, to, let's say, to transfer the knowledge to so that they have an effect on their side so that they can benefit from

00:06:44: Hari: it.

00:06:44: Hari: And this knowledge transfer involves all the faculties as well,

00:06:47: Prof. Kisters: not just certainly it's not only that one. But, um, I decided to mention this one because here we're talking about the society and it's not always related to companies only. It's also quite important to have, uh, to be in good contact to the society to explain what we're doing and to explain what are the next steps, uh, to get a kind of, uh, confidence in what we're doing.

00:07:10: Prof. Kisters: Uh, and, and therefore I decided to explain it based on society. Okay.

00:07:16: Hari: And from here, the project was developed TransRegINT. Yes. Could you tell me about the history of the project in particular, how it started?

00:07:25: Prof. Kisters: How did it start? So we decided to develop some research, some communities in the university that focus on a certain kind of research.

00:07:35: Prof. Kisters: So we call it Forschungsschwerpunkt. Profile in the end, a research profile. And during that process, we had some pitches from our scientists from Kamp-Lintfort from Cleves and so on. And one of them, that was Professor Becker, he said, we have to stay for something. Yeah. It's not enough just to do science.

00:07:57: Prof. Kisters: Uh, we have to stay for something. Um, and that was the starting point of TransRegINT because this was what all of us realized is necessary. We have to get profile for the university. We have to stay for something. The people understand the people outside the university understand, and this is sustainability in the end.

00:08:20: Prof. Kisters: And we as a university, we are young. We have quite a lot of young colleagues, professors, scientific staff, and so on. And all of them have an idea of what sustainability will be or is. And all of them can focus their research on these sustainability topics. And it was quite interesting to see how this

00:08:45: Prof. Kisters: let's say sentence, we have to stay for something. We have to be responsible, or we are responsible for the future somehow changed their minds and they started to think about sustainability much more than before. We then decided, okay, we need a kind of a nucleus for exactly that. We need a kind of a project that deals with sustainability or that focuses on sustainability.

00:09:09: Prof. Kisters: And that was the start point of TransRegINT. And then we started to develop this project and decided to have some labs that are open for society, that we are going to do citizen science, that we would like to do study programs that integrate research and transfer into teaching. And all that is part of TransRegINT nowadays.

00:09:31: Prof. Kisters: All that is what we're starting with right now. And I hope in four and a half years, five years, we have reached a point where sustainability is something that all of us see as a kind of a unique selling point of the university.

00:09:50: Hari: And could you explain about what sustainability means? Because it's a word

00:09:55: Prof. Kisters: that's used a lot.

00:09:56: Prof. Kisters: There are quite a lot of different definitions if you have a look at the literature. From my point of view it is quite simple. If we don't use more than what will be produced during the time of use, then it is sustainable. I don't want to go deeper because you will never be right because there are so many different, uh, definitions from different perspectives, but we all have a kind of feeling what sustainability is.

00:10:25: Prof. Kisters: Sustainability is certainly not if somebody puts a green label on his product. Now that's not, that's greenwashing clear. Yeah. But in this university, all of us have an idea of what sustainability is. So we need solutions for the future that reduce CO2 emissions that enable us to produce products with different materials that are sustainable again,

00:10:50: Prof. Kisters: and these materials replace the conventional materials such as steel or whatever, or plastics, we need biocompatible plastics. All that is sustainable . So if we can say, okay, what we use can grow during the period of using. From cradle to cradle is another argument that you can find in this field where it is quite a lot about building a house and what do we do with this house afterwards? Can the materials be used for something next? And step by step, you use materials not only for one purpose, but for many purposes during its lifetime in the end. If we're talking about wood, you can use wood for 200, 300 years if you want.

00:11:34: Prof. Kisters: And that's the time that is needed for a tree to grow again, to be a big tree in the end. And this is my understanding of sustainability, that we don't use resources that will not come back within the time of use. So for example, coal needs millions of years. But we use it in a few hundreds of years.

00:11:56: Prof. Kisters: That's not sustainable. For sure not. If we're talking about wood and we use it for 200 years and at the same time, the new trees growing, then this can be a sustainable solution. And

00:12:06: Hari: TransRegINT has a focus on the lower Rhine region, correct? So what are the problem points in terms of sustainability that exist in the local industries in this

00:12:16: Prof. Kisters: area?

00:12:17: Prof. Kisters: There is a big agricultural industry in this, in this region. And if you have a look at this and you look at the production of milk, for example. And we have hundreds of cows here producing milk, but the milk will be transported to Cologne to Düsseldorf to, I don't know, Hamburg, Munich, whatever, you know, or to China if it is milk powder.

00:12:40: Prof. Kisters: What remains here is all the rest. Yeah. It's only the milk that goes away. So we have no closed circles. They sell the milk, but they don't sell the waste products and the waste products stay here and they contaminate the ground, soil. Under normal conditions, part of each milk bag needs a little bit of waste product on it to be transported so that the circles are closed again.

00:13:08: Prof. Kisters: Perhaps somebody in Cologne can use it for their plants, drink milk and have something for the plants. That would be a totally different loop that we finally get, totally different closed cycle. But we don't have it at the moment means all the waste products stay here and they will be in the soil sooner or later.

00:13:30: Prof. Kisters: And this is for sure not a sustainable solution because it contaminates the soil, it contaminates the water and so on. As soon as we look at the region, we have to think about how can we overcome that situation? What is necessary to, let's say, to have less pollution of the soil, for example. How can we come to, let's say, a system, agricultural system, that is sustainable?

00:13:55: Prof. Kisters: That's one, one example. Another example is, if you look back and think about the summer in 2022 or in 21, temperatures were quite high, hence the soil was dry, really dry, and deep in the soil it was dry as well. the conditions for plants to grow were not perfect anymore. This year it seems to be better, but it does not mean that it, that it is only 2021, 22 where, where we had the problem with the high temperatures, there will be problems in the future as well.

00:14:30: Prof. Kisters: So another question is, how is it possible to keep the ground wet? How to avoid that all the moisture disappears, all the water disappears. And again, it is a question of agricultural systems are modified agricultural systems that perhaps work with much more shadow than we do it nowadays. Why not putting trees above to protect the soil?

00:15:00: Prof. Kisters: Why not having some photovoltaic elements above to have shadow below? I don't know what is the solution. That's exactly what the guys in the focus field do. Uh, but in the end, it is clear to me that we have to do something because otherwise we can't go on as we do it right now for the next 20 years because we'll become warmer and we also have no closed loops, no closed, uh, circles.

00:15:31: Prof. Kisters: And this is the cycles. This is exactly what we have to modify. And this is one part of TransRegINT. It's not the only one, but this is one part. And as soon as we look at this, you have to convince people that other systems are helpful to, uh, are necessary to design the future. And as soon as we talk about people, we're not only talking about the people on the street, the people that buy milk and so on, but also the farmers.

00:16:02: Prof. Kisters: We have to change the systems as well. And this is a process that cannot be done within a few days or years. That's a long process because they build up systems that are quite expensive and they invested in it and they can't stop with it right now. So we need solutions, ramp down the old system, ramp up the new system.

00:16:23: Prof. Kisters: That is what we finally need. This can only be achieved, this can only be successful if we have a situation, where the customers understand this, this process, again, it's transfer in the end, transfer of knowledge from the university into the region. And if we can provide some solutions for farmers because they want to earn money not only now, but also in 10 or 20 years, hence it needs a kind of a balance in between ecological and economical aspects.

00:16:53: Prof. Kisters: And it needs solutions that enable us to design this change, this transition from old system into new system. And that requires time and it requires communication to finally be able to explain what is behind and to explain why it is necessary to do the steps. Because in most of the cases, I don't believe that we will be able to come to solutions without

00:17:18: Prof. Kisters: reducing our consumption. Yeah. So less is more in future. And this is another aspect that we have to keep in mind. Do you foresee any challenges

00:17:27: Hari: on that aspect? Like this part where you have to communicate to people, more or less convince them that I'm talking about customers at this point, that their habits also have to change because you mentioned greenwashing in the beginning.

00:17:38: Hari: And I think greenwashing is definitely a scam and make people feel like they're doing something when they're not actually. But I think that's part of the appeal, right? Because it's very low effort. And the threshold for them is very

00:17:48: Prof. Kisters: low. I think the people have a feeling for what's greenwashing and what is no greenwashing.

00:17:54: Prof. Kisters: If I have quite a lot of certificates on a plastic bottle, it becomes clear that this is not really sustainable. Nevertheless, as soon as we talk about transformation processes, we have to explain much more because then it's not obvious what is, what is greenwashing, what's not greenwashing. It is not obvious where this information comes from.

00:18:16: Prof. Kisters: So it is also kind of data literacy that comes into play here. If somebody tells you this is good for the future, is it right or is it wrong? Who tells you if it is right or if it is wrong? What is fake and what is, what is real? And as soon as we talk about knowledge transfer and, um, transfer into the society.

00:18:38: Prof. Kisters: For example, we as a university are able to handle information and we can differentiate in between fake and real. And we, we look at facts, we look at data. Hence, we have an idea of what is good and what is bad information. And this is our obligation to, to communicate what is good information and what is, let's say, information that helps us to do the next steps.

00:19:04: Prof. Kisters: At the same time, we have to keep an eye on the bad information as well, because this has to be transparent in the end, what is good and what is bad. Otherwise, people will never understand or will never be able to really differentiate what is good and what is bad, and they will not be able to say, okay, because of that information, my behavior,

00:19:27: Prof. Kisters: I would like to change my behavior. And there we as a university and not only we but all the universities all over the world, all the scientists all over the world have a task. This is a real task we have and we have to be clear in what is good and what is bad information.

00:19:45: Hari: Okay. Okay. And what about the, when I was reading about TransRegINT, I saw the word hub, like the three hubs and also the sub projects that make up the whole TransRegINT project.

00:19:56: Hari: So could you tell me about those? What are the sub projects that are done?

00:19:59: Prof. Kisters: Yeah, as I said, uh, we have these hubs, uh, three different hubs, uh, one for interaction. Interaction means, uh, when we do science or when we do investigations, we don't want to do it alone anymore. Now, we would like to invite people to, to do it together with us.

00:20:16: Prof. Kisters: And we would like to open, um, the doors of the university, not, not the real doors, but, um, have more transparency in what we do now, have more options for people from outside the university to work together with us. And this is part of the interaction hub and, and the transformation hub, which is the one in, in the middle, which is from my point of view, the, the most important one if it comes to, to convincing people that we need some other solutions.

00:20:45: Prof. Kisters: This hub is filled with real labs. Yeah. So labs where people can go to and see what is going on. And if we're talking about agriculture for example, again, then we

will have Agroforst real labs. Means a combination of producing plants, vegetables, for example, on the one of fruits on the one hand and having trees in it as well.

00:21:08: Prof. Kisters: This is a system that is well known. But we forgot to use it. Uh, so this is 400, 500 years old and uh, and at that time it was quite common to have a combination of fruit and vegetable production and wood production, which is, uh, forest In the end, and this is what we would like to show once again. So that people can go there, can see what is going on.

00:21:34: Prof. Kisters: At the same time, these labs are required to investigate how the behavior or the conditions in such an agroforest will be. How is the impact on the moisture in the ground, for example, which plants are those that are suitable for such a system, which of them are not suitable. All that has to be investigated in this field.

00:21:55: Prof. Kisters: And our task to have something that is open for the society so that people can go there and see what is going on. We try to open the entire campus in Kamp-Lintfort. Citizen science is the keyword there. And they would like to have kind of a big lab for the entire campus with all the small labs, part of it.

00:22:18: Prof. Kisters: So the combination of labs or a lab map in the end. That is what they would like to have. And again, they want to open all these labs for people like you and me just to go there and to work together with the scientists. So it does not mean that you have to study something. You can also work in a project without being an academic.

00:22:41: Prof. Kisters: You can go there and add your point of view, your perspective to a scientific project, for example, and that makes it worth more than it is if it is only science. Yeah, because at that time it's not only science, but it's science that has been evaluated by citizens. And that is worth more that is easier to transform that, uh, to, to, uh, to communicate.

00:23:08: Prof. Kisters: It's easier to establish if you would like to have kind of a return of investment. I'm not talking about money, but about effort. If we do something in the university and we forget to talk to those that finally should use it, then it will never be successful. And the citizen science approach is exactly this integrated approach of

00:23:28: Prof. Kisters: having science on the one hand and people that work together with the scientists so that it is easy to understand what they're doing. They're part of the project and hence you don't need to convince them anymore.

00:23:39: Hari: So you engage end users at the very first stage itself because they are the end users. So their concerns and their non expert knowledge also taken into

00:23:47: Prof. Kisters: account.

00:23:48: Prof. Kisters: Exactly. Or they, they are, yeah, let's say concerns about using things, assistive technologies for handicapped people, for example. How to design things like that without being in contact with those who have to use it in the end. And this is another part in this transformation hub where we try to build a bridge in between science and what is all around the university.

00:24:12: Hari: And at the same time making the whole process very transparent so they could actually watch the so called science being

00:24:18: Prof. Kisters: done. Yeah. Citizen science is always, or has to be transparent, otherwise it doesn't work because we open our doors. Hence, we would like to give the people in, look inside the university.

00:24:29: Prof. Kisters: At the same time, we would like to go out of the university to go to the citizens again. Yep.

00:24:34: Hari: Yeah. Okay. Wow. And so there are these other projects as well. So there was the agroforestry project where there is some overlap with the sustainable food systems research center, right?

00:24:44: Prof. Kisters: Yes, there is an overlap.

00:24:46: Prof. Kisters: This focus field sustainable food systems has been established and it is supported by the university. So we spent some money to do the coordination in that focus feed, for example, but the scientists are responsible for the content. They Yeah. try to get funding for their research. That's what they do.

00:25:05: Prof. Kisters: And they certainly are a part of TransRegINT because it's exactly the same topic. So we, what we wanted to do with TransRegINT is to put all these projects that already lived when we applied for this project, they were already there. We tried to put them together, build a kind of a roof above and that's TransRegINT in the end.

00:25:27: Prof. Kisters: And this roof It's now, yeah, let's say trademark of the university somehow. But it is, it's not that we do something parallel or in parallel. We do it with exactly the same people, but with more resources now with more power in the end.

00:25:43: Hari: And more connections among like network as well.

00:25:45: Prof. Kisters: More connections because it is now part of a bigger project.

00:25:50: Prof. Kisters: Yeah.

00:25:51: Hari: And what about the other, the other two names that stood out was faculty of the future and hydrogen in the lower Rhine. So what about those projects? What are those about?

00:26:02: Prof. Kisters: Faculty of the future is an approach in technology and bionics. Before I said, okay, we try to bring teaching science and research and transfer closer to each other.

00:26:15: Prof. Kisters: So this is exactly what they're trying to do. They start to design a study programs that are project based, completely project based from the first day on. And as soon as you do things like that, you have a workbench. So think about a workbench. So the project will be done on the workbench, but this workbench has an end.

00:26:36: Prof. Kisters: Two ends in the end. One end is the interface to the companies all around. So why not doing project that are interesting for the companies all around, put them into the studies and let students work on these projects and learn or gain competencies by working on these projects. That's the idea behind.

00:26:58: Prof. Kisters: But that also means as soon as we do these projects in a study program and we have some companies involved, then we do transfer. Yeah, because we do technology transfer in that case in technology and bionics, but it will be possible in other faculties as well. Then it is another kind of transfer. This enables us to adjust our teaching to what is interesting in the, in, in the companies and the scientific communities as well.

00:27:29: Prof. Kisters: Yeah. This is one end of the workbench. The other one is the end of the studies where it comes to perhaps the idea to do a PhD where it comes to research. Hence, at the same time, these projects guide our students into research and they are resources for doing research sooner or later. So it enables us to bring research topics into teaching.

00:27:56: Prof. Kisters: And now we have these three columns, teaching transfer on the one end and research on the other hand. And that's exactly what they're trying to do. Hence they open their faculty as well because they try to integrate companies in the teaching process. They try to integrate research into the teaching process.

00:28:15: Prof. Kisters: And by doing so, there will be a chance to be much more up to date in what they're doing than if you have a kind of a curriculum with fixed content and you do

math for 20 years the same and things like that, yeah. In such a situation, math would be done on a project. So tailor made for what is needed.

00:28:35: Prof. Kisters: And then it is not the expertise that is most important, but the competency that is more important. And the reason for that is, do you know what you're going to work in 10 or 20 years? We all don't know it. Yeah. So. Perhaps there will be some jobs where we at the moment have no idea about, where we can't see the use or the need for such a job, but there will be these jobs and hence the challenge will be to educate students in a way that they can use their knowledge for things they don't know right now.

00:29:08: Prof. Kisters: Yeah. Yeah. Self learning is quite an important issue in it. Hence, the study programs are designed in a totally different way. They are not focusing on expertise. They're focusing on competencies so that they can be used to get familiar with a totally new field, for example.

00:29:27: Hari: And is this a gradual series of modifications to the existing syllabus or is it going to be like you have a certain date where the whole syllabus is going to be revamped for the incoming semester?

00:29:38: Prof. Kisters: It's under development at the moment. Yeah. So it is not completely clear. It's totally different to what we normally see. Hence there will be quite a lot of negotiations necessary with the ministry, for example, in terms of how to make it run, how to put it into the existing structures that we have to keep in mind.

00:29:58: Prof. Kisters: Hence it is not really clear how it really looks. But what is clear from my point of view, because I'm part of that team developing it, is that we are not going to have these two hour slots anymore, but the department structure where the students work in as in a company. So what we do is we, we develop a kind of a

00:30:18: Prof. Kisters: campus company and do teaching in that company.

00:30:22: Hari: So what would be the role of internships then? Would they still have to do internships? Because it looks like their education itself is, has internships

00:30:28: Prof. Kisters: built in. Exactly. It's integrated somehow. Nevertheless, I believe that the, an internship in a company will still be important because The structures in the university are different than the structures of a company, and hence the processes are different as well.

00:30:44: Prof. Kisters: So it is not only understanding what is the expertise or the competencies of an engineer, for example, it's also how to run a company or how does a company work? How does it function? And therefore the internships are still important.

00:30:59: Hari: Okay. And the companies that you plan to be engaging with throughout this program are from the area.

00:31:06: Hari: So does this add, is it also important to add this interest for students to stay in this area after leaving?

00:31:12: Prof. Kisters: First of all, yeah, certainly this, this is the target. This area can benefit from the university, especially if the area understands or the region understands how to deal with languages. At the moment, there's a break in between English studies on the one hand and German companies that would like to stay with German in their companies.

00:31:35: Prof. Kisters: They are not that open to, to change the company language. It's more or less the same as what we discussed before with the farmers where we need some ramps down and some ramps up. Same happens here. We can use studies to start in English, perhaps, but to have a kind of a development towards German so that they are interesting for German companies here in the region.

00:31:58: Prof. Kisters: Nevertheless, There are always two hearts in my breast when we talk about this. On the one hand, it's important to, to have stuff here in the region for the future. On the other hand, we're talking about corporations of companies in between Germany and all the other countries all over the world. So it doesn't matter if somebody leaves the region again and works for German

00:32:24: Prof. Kisters: company, for example, in another country. Why not? I'm certainly very interested in supporting the region, but there are some alternative ways as well that also support the region without having the guys here. So both is possible. And certainly we as a university, we think the region has a very good chance when it adapts to the conditions of the young people coming to this university and leaving it with a certificate or with a degree.

00:32:54: Hari: From a perspective of, let's just say a student graduates and a student really has this interest of making a difference with their expertise, I think there is a growing awareness of trying to make the most difference with what you have. Do you think they could do that more if they would work in a bigger place with a more developed industry or would it be more beneficial for them to start in a smaller

00:33:19: Prof. Kisters: region?

00:33:20: Prof. Kisters: This question is hundreds of years old because I asked exactly the same questions when I did my studies. What is better to work for a medium sized company, for example, or for a big company? Or for a small company. I think it's a question of personality. If you would like to do a certain job and exactly that job, then perhaps it's better

to go to a big company because these big companies have quite a lot of people working there and each of them can focus on a certain field, on a certain smaller field.

00:33:53: Prof. Kisters: The smaller the company, the more diverse the different tasks will be. So it is a question of what you like as a student in the end. And I can't give a recommendation, do it in this way or do it in that way. Uh, it is always a kind of an individual, uh, decision that has to be done. And it's, it's a question of the personality of the student.

00:34:16: Prof. Kisters: Is it more somebody who wants to have different Tasks or is it somebody who wants to focus on a certain field? Yeah. Do calculations all the time from eight to five in the evening, or do you want to have meetings to have conversation, communication? Yeah. Let's say. access to different projects, jobs in different projects.

00:34:38: Prof. Kisters: That's the question. If it is a small company, then sooner or later your jobs will change. You do something, you do it good, and you will get the next job that happens much faster because there is nobody else who can do it. In bigger companies, it takes more time, but there are some other advantages if you work in bigger companies.

00:35:01: Prof. Kisters: But As I said, I started in a medium sized company and I really loved it. I have some colleagues who started in big companies and they loved it as well. Yeah. So it is a question of what you would like to have.

00:35:15: Hari: And yeah, this other project that we didn't get into the hydrogen in the lower Rhine, what is that about?

00:35:20: Prof. Kisters: Yeah. What, where does energy come from in the future or which energy would we like to use? Is it still coal, gas, oil? from my point of view, that's not sustainable. But to find some alternatives, some other hydrogen comes into play. We have sun and wind, and we have a lot of sun and a lot of wind in this region.

00:35:45: Prof. Kisters: And we have quite a lot of windmills and photovoltaic on the roofs of the houses. Hence this, this region produces more energy than it uses. And that means There are some other regions, for example, Duisburg, where you have quite a lot of chemical industry, where you have quite a lot of steel makers, they need quite a lot of energy.

00:36:07: Prof. Kisters: So the question is, how can we combine it? And the big problem is wind and sun are not always there, but it's enough. So it is clear the sun alone would be, uh, would give us the entire world enough energy to run the world if it runs right now. So we need no oil or no gas. It's not there all the time. And that means we need something in between.

00:36:36: Prof. Kisters: We need something to store energy. Batteries are one option, but it is a lot of energy that has to be stored. And hydrogen is another option. And a lot of energy can be stored on a small, relatively small place or room. For example, if you would like to store hydrogen, you can store 600 kilowatt hours on a square meter.

00:36:58: Prof. Kisters: So it's not that much space required. And the question is, what do we do with all the energy that will be produced in this region? And can we produce even more than we do at the moment? How can we make it independent, make the use of energy independent from the production of energy? Therefore, there must be some kind of a buffer in between and the buffer can be hydrogen.

00:37:22: Prof. Kisters: And this is exactly what we're trying to investigate. And at the same time, if you would like to have things like that, if you would like to have a kind of a hydrogen industry, it needs some people. who can do that. Again, it's a question of education of jobs and so on. And our part in it is more to have a look at what is needed for young people to be an expert in hydrogen and the field of hydrogen and the end to what are competencies that are required.

00:37:53: Prof. Kisters: How can it be introduced into companies? How can companies benefit from all that? How can we, let's say, Define the potential certain companies have, and this is quite a big field. I'm not sure if it has been a kind of a hype two years ago, so all the budgets were filled or all the funding systems were filled with quite a lot of money for hydrogen project.

00:38:18: Prof. Kisters: I think it goes down a bit now because of some other trends, some other hypes. But what remains is enough to go into this field and investigate it properly and to make something sustainable out of it, you know. So it is again a question of what is the core of that hydrogen idea and what can really be realized in the end.

00:38:39: Prof. Kisters: This is the part where we try to find out together with quite a lot of other stakeholders in the region, where we try to find out what is the position of this region in this field of hydrogen? What can we offer? Can't we offer? How can we cooperate with other regions that are in a totally different situation than we are?

00:39:00: Prof. Kisters: Now, since

00:39:00: Hari: we're on the topic of energy power generation, something that comes to mind is a former nuclear plant that is not so far from here. So what is your position on nuclear energy regardless of questions of legislation or whatever? But since we're talking about clean energy,

00:39:16: Prof. Kisters: it's a difficult question.

00:39:18: Prof. Kisters: My position, if it comes to nuclear energy is a quite clear one, I have some children and hopefully they will have some children as well in the future. I don't want to influence their lives by producing waste, nuclear waste that has to be put somewhere. And until now, nobody has a solution for that. If we do something and produce some, in this case, produce some waste, but we don't know what to do with the waste, then we should stop doing it because otherwise we make our life easy by using energy, the CO2 neutral, but this has other disadvantages that we just put into the future.

00:40:02: Prof. Kisters: And this is, this can't be the solution. This is not sustainable in the end, because some other people have to deal with these problems. We generate, as soon as we talk about sustainability, it's not only about stuff and things like that. It's also a question of problems that we forward into the future.

00:40:20: Prof. Kisters: And if we forward problems into the future, then it is not sustainable anymore because it's not a full solution. It's only part solution that helps us right now, but it won't help us in the future. Since we're also

00:40:31: Hari: talking about research, don't you think that if, for example, all the plants are shut down, wouldn't research also stop?

00:40:38: Hari: So we're not going to actually find out the best ways to get rid of nuclear waste if we don't allow it research to happen. And wouldn't that be a bigger disadvantage?

00:40:46: Prof. Kisters: Certainly. So, yeah, yes and no. I agree. It is not good if we stop doing research on this topic. We should concentrate the research on how to solve the problems with the waste that is more important than the research on the nuclear plants, because they are more or less understood.

00:41:04: Prof. Kisters: Certainly, there is progress and there is development, but It's much more important to find a solution for the problem with the waste. In Germany, there were almost 100 chairs at universities for nuclear energy. Now there are two left in whole Germany because of political decisions. That's clear. And there is no funding anymore.

00:41:28: Prof. Kisters: There is no money for this anymore. I don't know if you, if I like it or if I don't like it. So science must be possible from my point of view to find better solutions. If you stop doing science, there will be no better solutions. That's clear. But science must also be, let's say, targeting the problems that, that we have

00:41:49: Prof. Kisters: and also the future problems that we will get. And I think there, there is no balance right now. They always focus on the plants because you can earn money with the plants, but you can't earn money with the waste. You socialize problems by doing so. The

society pays and that is no, not a good idea. And that's the reason why I'm somehow, somehow I think, okay,

00:42:12: Prof. Kisters: science is necessary, but if you do science on this and focus on the problems and not focus on the earning of money, by the way, from my point of view, there will be another currency in the future that is more, more important than the Euro and that's the CO2 emission. So our evaluation, if a solution is a good one or a bad one is not.

00:42:33: Prof. Kisters: focusing on money anymore, but focusing on sustainability.

00:42:36: Hari: And, um, for a student like me near the end of my studies, so I will be out of here before TransRegINT has flourished, but what could I do to contribute to a more sustainable world? Sounds like a very generic question, but that's a, it's a good takeaway question.

00:42:54: Prof. Kisters: Let's do it the other way around. Let's look at me. I can have a look at my grandparents. They lived differently, but much more sustainable than I did. They had a much smaller world all around them. They never flew into holidays or things like that. And the question is, does it really satisfy you? If you do these things, we can do right now, but we do without thinking about the consequences for the nature for our world in the end.

00:43:27: Prof. Kisters: And I think what is most important is to reflect your decisions. It's not that I would like to give you a recommendation, okay, do this and do that. There are quite a lot of different options to do something. But again, it's an individual question, a question of what is good for you and what is good for me.

00:43:48: Prof. Kisters: I don't know if you eat, if you are a vegetarian or not. Hence, you like meat. I do the same and I don't want to reduce it to zero, but I reduce it to 50, 40 percent of what I did before. And I think for all of us, there are options to keep an eye on sustainability closest are another topic. Where should they come from?

00:44:14: Prof. Kisters: Is it fair handle traded to material or not? So there are quite a lot of small aspects that we can do in our private lives to finally be sustainable in what we can influence. The big changes, the transformative changes require some guidelines, some politics to do them. But all of us can do in our surrounding, in the families and in the houses or whatever, we can reduce our consumption somehow.

00:44:44: Prof. Kisters: And it is not a big issue. So if I would be 10 or 15 kilogram lighter, that would be good for my health. So I can combine things to become sustainable. And I said, I don't believe that it is a good idea to tell somebody what to do. And because then the motivation is an extrinsic motivation and not an intrinsic motivation anymore.

00:45:07: Prof. Kisters: All of us have to do what we are willing to do and what we are able to do. What is most important is that People understand how does my behavior influence our world or my surrounding or whatever. And I have to start thinking about what are the consequences of my doing. And as soon as you do that, as soon as you start thinking about that, you become sustainable

00:45:33: Prof. Kisters: without any problem because you come to points or two decisions that you have to do, which are, let's say, good or bad terms of sustainability. And as soon as you think about it, you start thinking about, okay, I go for the good one, even if it costs me something, effort or whatever. And that's from my point of view, the first step into it.

00:45:55: Hari: So a rather simple change of mindset that will

00:45:58: Prof. Kisters: pay dividends. Nice. I would, it would be nice not to have these big places in front of the supermarket, but much more bicycles standing there. And we're talking about a few hundred meters and most of the people drive to the supermarket. Is it necessary? If you start thinking about it, you come to the conclusion.

00:46:19: Prof. Kisters: In most of the cases, I can do it by bike. I don't need the car. And if you think about the time you spend to go there, then you will realize, okay, I'm even faster with the bicycle than by car. Hence the mindset and the thinking about consequences. That is from my point of view, most important. And then each of us will find a field or some things that can be changed.

00:46:46: Prof. Kisters: And step by step, it becomes more. And at a certain point, you start to invest money, for example, to become more sustainable. You invest money in a photovoltaic system to get your own energy, be independent or independent from others. You think about other things, other heating systems or whatever, you know, you start buying your food in the region itself and you try to avoid to buy things that came by ship or came by, by airplane or things like that.

00:47:17: Prof. Kisters: It's not the one thing that has to be done. It's much better to do a lot of small things because our customer behavior influences industry again and then there will be the big changes somewhere else.

00:47:40: Hari: This was the sixth episode of How the Hochschule Voices. We welcome all feedback and are always looking for ways to improve. You can reach us directly at podcast@hsrw.eu and check out our show notes for links and more information about today's topics and guests. My name is Hari. Thank you for listening.

00:47:57: Hari: Tschüss!