

CONTEXT: Interviews conducted as part of an investigation into the barriers to, and opportunities for, achieving Circular Synthetics. Research was funded by Business of Fashion, Textiles and Technology Creative Research & Development Partnership (BFTT CRDP—£5.5 million) led by the University of the Arts London, part of the UK Creative Industries Clusters Programme (CICP) funded by the Industrial Strategy Challenge Fund, and delivered by the Arts and Humanities Research Council (AHRC) on behalf of UK Research and Innovation.

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1: Interviewer

2: Interviewee A: Circular strategy lead for consumer goods, fashion brand

3: Interviewee B: Circular innovation lead, fashion brand;

1: The first question is, can you tell me a bit about the background of [redacted] and your role within the company? I don't know. **2,** would you like to go first and then we'll talk to **3?**

2: Yes, sure. I can tell you a bit about the role that I do and what it's about. I started at the global sustainability department for the group this year, just after Christmas, and I'm working on the environmental team. I'm the circular strategy lead for commercial goods. So then we have a circular strategy department. I'm more focusing on everything that we sell, and then my area is covering the entire value cycle.

Our aim is really how can we be fully circular in each of those areas, so really looking at everything from design, materials, how we're working with production processes right through to customer use and reuse, garment recycling, and how can we then get fibers back into new materials to keep the continuous material. My role is really having the overview of that total strategy area and then being connected with networks within each of those areas who would more like deep dive, I think **3** being one of those experts.

1: That's really interesting. Do you think there's any part of the whole lifecycle that you don't really have very good sight of or that you're not working with at the moment?

2: We're at different stages within that circular approach. Like some areas, we have made some progress and we have quite clear goals like materials, for example, we've been doing a lot of work there. There's some areas where we're now starting to dive a bit more into. Design would be an example we're really looking at now; how can we structure a guideline to work with circular design, how can we support and lead our teams there, what kind of tools do we need, how do we set goals? We're really digging into that at the minute because the feedback has such an impact in the other areas.

To reuse models is something we're also looking at a lot now because we've been doing a lot of pilots, but now we're looking at how do we then go from pilot scale to quite a leap there; what do we need to do, what impacts do we need to have and so on. I think the areas that we maybe need to look more into-- we're starting to look

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more now into production processes, but that's one area we need to look more. The recycling side, I think there's still a lot of tension there. We're looking at that. We have an established garment-collecting program and then try to live in, but then there's still a lot of challenges in the sorting industry, and then to really be able to connect the dots of getting that feedstock into new textiles, I think that is an area where there's lots to do.

1: Fantastic. 3, would you like to explain--

3: Yes, sure. I've been with [redacted] for quite a long time, but since I think now four years, I've been working on the same team as our environmental team in the leads department at the head office here in [redacted], focusing during that time on our strategy when it comes to more sustainable materials, recycled materials, but also what we refer to as sustainably-sourced materials, for example, organic cotton or other kinds, certified fibers and other materials. Also, I had on my table innovations in the space of research and technology, and the materials, and so on.

Then about a year ago, me, and [redacted] and our colleague, we started a new initiative we call [redacted] because we saw that there is a gap in our own strategy in how we work with innovations in this space, and there also was a lack within the industry from a brand side at least to support innovators of these technologies in a certain stage of their development.

We had other activities like equity investments and we had smart upscale or scaling-up activities in terms of buying bigger and bigger volumes. In terms of helping them out with proof of concepts or prototype being or smaller capsule collections at premium prices then, of course, in this volume, smaller volumes, that was lacking. We set that up and started one year ago, from then we have been identifying these entrepreneurs and setting up various kinds of projects with them to see, first of all, is this really relevant for us, we'd work as promised, and also how to support them to take further steps towards more industrial-scale production.

1: Are those mostly material innovations, like different types of fibers or dyeing or those types of things?

3: The scope right now, the first year, has been recycled materials or materials produced from other feedstock than what is conventional, then, of course, more sustainable feedstock. Also, within the scope has been production technologies for dyeing, or tanning, or printing, we have not come as far on that side, but that's something that we are trying to dig more into. Within the project that we set up, we also tried to connect to other aspects of circular systems like in one project, for example, we have been using automatic sorting technology to sort out textiles that would then go into a recycle process which is the one that we're actually evaluating but we connect different parts of the circular system within the project.

1: A couple of points. On the demonstration or the support that you're providing these small startups, I'm just trying to think about why do they need that? What is it that you're adding that [redacted] isn't doing or that the other initiatives by [redacted] are not covering?

3: Yes. This is a very good question. [redacted] as you mentioned, that's also important part of this, what we call now the ecosystem of how we work with innovations within the company even though [redacted] is a different entity, but connected of course, somehow. It's like we're serving different needs on the innovators and we'll say [redacted] and the [redacted], they are even earlier than we are in [inaudible 00:20:43]. It could be just a concept that point or an interesting idea of producing a new material in some way.

That grant money that can be used, of course, as the individual funds. Then we have the equity investments. When we become shareholders and so on, but then this is more like setting up concrete projects that are aiming at connecting these entrepreneurs to their textile value chain, for example, or even publicity. This liberty marketing that would potentially help them to get funding also from others. We said, okay. We have tested this. It has to work. It does work, and that is something which is very difficult for them to get on the road. [inaudible 00:21:37] some academic research work. Very far away from the textile industry.

1: It's a really interesting project. It sounds a bit like advocacy in a sense, but also demonstration, and almost as well, I guess, from what you said about the capsule collections. It's about being able to pay a higher price for those materials before they become so scalable that the price can come down.

3: Yes.

1: Okay. Really interesting. Thank you and again, just picking up on something else that you said there and also, it's great to have you both on the call because I can see that [redacted] really starting to take this whole systems approach and as you say, join the dots between these different things, between the design and the materials. How challenging has that been and how long has [redacted], when did that vision start in a sense?

2: We've had that vision for a number of years, I would say, but I think we are quite a big organization and often how we work can tend to be a bit siloed some ways, sometimes. I think what challenges is to really be as a systems approach, and that really are these areas are so interconnected but to work with them in that way, it can be challenging and it takes a mindset shift sometimes. When you're working with large teams, that can be a challenge. How do you adjust the mindset of many people, and really get people on board and bring them with you.

1: Interesting. Okay, thank you for that. We want to now to talk specifically about polyester and synthetics because that's what we're trying to hone in a little bit. What have your experiences been of dealing with circular synthetics at [redacted]? I don't know who wants to start with? Maybe 3?

3: Yes. The most obvious or the material that we've been working with the longest time that's recycled polyester from [unintelligible 00:24:00], that's a very established more or less a conventional material nowadays, I would say, but that is not maybe circular in that perspective as to. It would be very difficult to turn the polyester garment back into a bottle again with today's technology. There is some small

volumes, some garments have been produced with it. More textile to textile recycled polyester.

That technology is still in it's, what do you call it? Infancy almost. It's starting slowly but very slowly on the volume. The available so most of them work like the last, I would say, five years at least or even longer, has been focusing on supporting startups that are developing technology really to enable textile to textile recycling on polyester and then it would actually also be possible to take a garment and turn that into a bottle and so on. That has so far been really on the development of the actual recycling technology and that is still, I would say a couple of years away before any bigger volumes become available, but also to be able to enable that, you need also the collection system and you need torquing and everything and you need a design of the garments that would go into the collection system and the sorting. Then the recycling too. If that is not there, then it will be very difficult still to do the recycling. There is some way to go.

1: Okay, a couple of I'd like to pick up on that is firstly, the small amount of textile to textile material that you're able to use, is that from a post-industrial- are they from post-industrial sources, the textiles, or do you know that?

3: Both

1: Both, oh, okay. That's it.

3: I think, to the best of my knowledge here, but most of the textiles that are not post-industrial though more like post-consumer are from somehow controlled sources like uniforms or some kind of very known controls.

1: The other thing I was wondering is, and maybe I don't know how much you're involved with the design, whether you know the answer to this question, but I'm wondering if the recycled polyester that you're using currently, are you finding that it's challenging to use for all applications or is it limited to specific types of colors, or--

3: Works for pretty much everything.

1: Okay.

2: Yes. I think it's been quite okay for the change.

1: 2, something you'd to add to that about experiences of circular synthetics at [REDACTED]?

2: I think we've quite covered [inaudible 00:27:12], but I can just agree and highlight that it's really all part of the systems. It's one thing having a solution for their cycling, but if we don't also have sorting and the feedstock coming in, the garments being collected, it really needs to work in a flow.

1: Sorry.

3: Another challenge, depending of course, on the recycling technology, but many of the recycling technologies that actually look very promising are more of a chemical

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recycling technology that basically breaks down the polyester into its chemical building blocks, and once you have those chemical building blocks, you have to purify them and take away all the contaminants and other fibers. Then if you manage to do so, then you have something that is of virgin quality and is perfect for use for anything but you need to make them back into polyester. It's a polymerization step and that could also be a big challenge to go from the smaller scale pilot or even first commercial plant of the recycling and then into a huge sized polymerization plant. Could be a tenfold difference in size here. To get that back into polyester in a traceable way, physically segregated, traceable way, that will be a challenge or, of course, other options like mass balance approach or these things.

1: The traceability at that molecular level is really challenging, isn't it? I suppose it can only be done through paperwork.

3: There is no difference in the molecule.

1: No. People could be checking anything in there though. Couldn't they? A lot of virgin going in to bolster it so how do you communicate that to, the recipe if you like. That's really interesting. You've mentioned already some of the challenges there and also 2 pick up as well. Both of you actually, that again, this how do you bring all of those different pieces together, the resorting, the recycling? I don't know if you've got anything else to say about that in a second when I just ask you this next question about what the particular barriers are to also I suppose, getting to the point where we have circular synthetics?

2: there can be many barriers in each of those areas. On my end, I'm working quite a lot with the garment connecting sides and communicating a lot with our sorting partner and I know some of the challenges coming up there. It can be a lot around how we also define these resources. When they are defined as wastes in a lot of countries, that can really limit how we move these resources around definitely is a challenge for having this material flow because it affects the possibilities to import and export these materials when they're [inaudible 00:30:53] as waste, and that can be quite tricky to work with.

I think that's one thing. Then, also when it comes to the sorting like now the sorting industry it's really primarily set up traditionally for reuse, and a lot of the sorting is super manual. It's going to take quite a shift really to get to this place where we really sorting for recycling and sorting on fiber levels. There will be some challenges with that transition but we know what needs to happen. Yes, I think there are two challenging areas that are quite visible on my radar. I know, 3, you probably see more visibly the challenges coming up more when it gets into the actual recycling side.

3: Yes. The one I just mentioned with the difference in scale of the different steps, circular supply chain or value chain, that's one that will take some time to build up. They have to find a good approach or strategy to do that. One challenge and a very important part of this whole new value chain will be, of course, the economy within it. It's that companies need to, of course, make a profit at all the different steps.

2: It has to be viable.

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3: Completely new system and set up and business models that needs to be created. I think that, for example, even if the technology is technically possible and able to recycle something it doesn't mean that it's economically viable or feasible to do that. In the end, what is actually being recycled within a certain facility will also depend on the economics of the process, the yield of the process, what different options of feedstocks are available, and so on. That will definitely need some time to work out. Also for us, I guess, since we are also taking sometimes equity positions in different parts of the value chain and others are, of course, doing that also. Somehow the system of how we measure and profitability basically [inaudible 00:33:57] as really different from a linear system. It's not my expertise.

1: You spoke before about that [redacted] can take on a role of helping these startups by paying a little bit more for the material that they produce but is there anything else that you think [redacted] could or should be doing to help to reduce that economic barrier which is inevitable until the demand and the technology reach some kind of breakeven?

3: I think there is one thing. It's not something that I think necessarily that specific [redacted] [unintelligible 00:34:44], I think it's something that is needed for most emerging technologies to be able to finance bigger plants or a bigger production and manufacturing facilities some kind of commitment from their future buyers or customers to basically de-risk the investment for investors to make sure we can actually sell what we will be producing. I think that's part. Most of the time or basically always we are not a direct buyer of materials, or fibers, or chemicals. That's somebody else in the supply chain.

1: Then, that's also potentially a barrier then that you don't have, perhaps, is it the site over the upper echelons of the supply chain or is there anything that needs to be done in terms of engaging with the upstream?

2: Yes. I think that's something we're discussing more and more in a way, but also the potential now when also the need how to connect this material flow back into the supply chain. I think it takes huge collaboration. Even when we think about having discussions on that involves so many actors because we're not the direct buyers of the material or chemical building blocks and so on. That's where we need to go to link them back in. That's somewhere that [redacted] can potentially be involved in support. It needs to be hugely collaborative.

3: [inaudible 00:36:48] more transparency within the supply chain further up. We are making and the industry is making a lot of progress in this area. If I compare 10-15 years ago, nobody know who is producing the actual fiber or even the polymer, going back. Now, brands are actually starting to engage in that area of the supply or value chain as well. It takes time.

1: We interviewed a yarn producer, and he was talking about because he had a particular- the value of his product was to do with sustainability and circularity, he was finding that actually he had to bypass the mills and talk directly to the brands. That could potentially be happening more and more that there's more of a connection across the cycle because essentially, the brands and the designers need

to be the ones that push for that buying or contracting those particular materials. That's really interesting. You haven't mentioned much about the consumer.

I'm just wondering if there's anything that you would add about if there are any barriers that you see with how people perceive these different materials or is now that taken out of the picture because the brands are driving it.

2: In general, I think the demand is only increasing. We could already see there is a big shift in customer behavior and customer demand, but I think that is only accelerating now. The customer is super eager, but I think the challenge can be a little bit how to really be transparent there and sharing what is happening with these materials, but in a way that is digestible and that can be perceived for what it is that sometimes be challenging because it's difficult to, like tell these stories in a way that it's factual, but it's also relatable. I think the demand is definitely there from customer.

1: How will consumers be able or customers be able to tell the difference? For example, I think if you look at recycled polyester on Instagram I think customers already think that it's happening. They don't see the difference perhaps yet between bottles of fiber and fiber to fiber. From the consumer's perspective, how might that happen if they can't tell the difference or if it doesn't seem to be-- Do you think there's a messaging thing there? Is it a problem or will it just happen anyway because brands need it too?

2: I think that one, it is a challenge. It becomes such a broad discussion on transparency then. In a way I think there also needs to be collaboration there as well in a way that you're sharing information in a similar way. I think that can be a direction that the industry is going towards like we see more and more platforms as well like wanting to communicate on different sustainability actions. To do it in a way that it becomes more clear for the customer and I think that really is the challenge.

3: I think in the longer run, let's say, we have a goal that is by 2030 to have only recycled or other single-source resource materials, 10 years from now, then it might very well be that it's not really relevant anymore to discuss that as a recycle or something like that because that would just be the conventional, that approach.

2: So exciting.

1: That's a nice idea. That leads on nicely to my next question.

3: Christmas tree in the store with labels like with all kinds of information, everything. I don't know.

1: The next question is what are the opportunities? You've talked about these a little bit already, but what strikes you as like the really important opportunities in circular synthetic?

3: For me, what's so great about synthetics is that I really do think that we can recycle it without affecting the quality or without decreasing the quality of it. There is no limit to it in theory, at least. On the cellulosic side for cotton, for example, every time you recycle that, it's like paper; you harm the fibers getting shorter and there is a limit that you can't really-- That these sell for today.

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1: What do you think about the challenge between all the-- well, not the challenge but almost the tension between the fact that polyester could be a very durable material and the fact that it's a very good recycled material? You've got perhaps a conflict there, do you think? Or is that not something that you think will be a problem that you could make polyester clothes that last for a long time, but at the same time if you're going to recycle them, you need--?

2: I think it's about creating products that really match the customer need, but also the use. Like what is going to be the use for that product and then picking your components accordingly. That's really what we're trying to look into now with the whole area of circular design. It really depends on how that product is going to be used and what that need is because if the product is demanding that actually I need to be really durable like if it's a coat, an outdoor coat, then you want that to really last, but then when it does come to the end of its used phase - great if it's durable enough to have multiple used phases - but at some point, it will go through that loop so many times that it needs to go to the next loop and be recycled. Then it's still really important that that material can circulate and become a new material. Even if it's a longer time between how often it circulates.

Then in the same way if it's a garment that you know that the used phase probably isn't going to be as long like if it's a - I don't know - a super trendy like summer dress and maybe it lasts one or two summers, three summers, then it becomes real important, that, that material can't circulate. I think in all cases, you don't want material leakage, you want the material to come back in. The whole point that we really wanted to gain more visibility on now in our teams is that you're designing and choosing your components then according to what the customer need and the usage demand is going to be.

1: That's really interesting, thank you.

2: I hope that makes sense?

1: Yes, that does, it makes perfect sense. It's nice to hear it because sometimes we go on about it as designers or as circular designers but it's nice to hear it from you as well. Brilliant. The next question is something we've slipped in here because it seems like an appropriate time to ask people this. I was just wondering if you've got any thoughts about how you think the pandemic has affected the way that people are behaving or the way that you're conducting your business.

2: I think there's no industry that it's not affecting. I think from what we can see is that it is only accelerating a lot of the shift in behaviors that were already happening. For a lot of people, this is really a time of reflection and people are really questioning how they're interacting with fashion being one area. They're questioning a lot of areas. I think there is an acceleration in that definitely and people are questioning like how they're accessing fashion.

1: So you feel like it's a positive change for circularity like it's reinforcing some of those?

2: Yes, definitely. I would overall or in general, I think circularity is really going to be so crucial for building resilience in the future. Really it's also about diversifying how you can access fashion as well and the linear model, it can be quite fragile in a way, and I think that is really highlighted now. I think circularity will really be a big part of how we can build in resilience.

1: 3, are you noticing anything in the way that it might be affecting some of your innovators or the people you're working with or the supply chains?

3: Short term during the spring, some of the, or several of the companies that we are working with, they have been under lockdown. That's, of course, had some impact. Now, more or less, more and more countries are opening up so that's just a short term I think in terms of their activities. I think also during this time at least, it has also been more difficult for them to find capital and then if they need further investments and so on, people have been, I guess, more careful with their resources and their investments and so on.

I think that in the longer run, it's probably as 2 expressed also, that change is probably accelerating about this pandemics or crisis. I know most businesses working with the global and the supply chain are also, I think, just start taking more steps into mitigating the risks with that to maybe have more localized production and spread the risks and so on and that could actually be helpful for some business models, for some recent [unintelligible 00:48:45].

1: Brilliant, thank you. Time's moving on quite quickly. I'm just going to post into the chat this link to the Google Drive. I've just noticed my battery's running low, so I'm just going to nip and get my charger while you're loading those up and I'll be back in one second. [pause 00:49:01] It's one definite effect of the pandemic is that my computer gets a lot more used. Not just by me either. Perfect. Do you have those in front of you then?

2: Yes.

1: Perfect. I'm just going to quickly-- This shouldn't take too long. It'll more or less be a case of going over what we've already discussed but trying to think about them in terms of these specific garments to see if it brings out anything new from your experiences. These are two garments from a team wear manufacturer that we're working with. They're polyester. There's a fleece which has some zips and some branding on it. Because it's team wear, they'd probably also have some kind of logo on them. I imagine that the leggings have got elastane in them. The question really is what, from your perspective, what is the lifecycle like for these garments currently? Then we're going to, after that, look at what changes could be made to that lifecycle.

2: Currently, do you mean starting from these products are already designed and in existence. They've already been sold to [inaudible 00:51:06] and so what happens to them?

1: Both ends really. How they're produced and how they are used. You're quite unique actually, 2. We don't often have someone who's got full sight of the whole lifecycle, so yes, anything.

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2: Start to finish, okay. Start to finish. From our perspective, these pieces would be part of a collection. That would start with first having-- you would first be looking at what is the concept of that collection. Then the designers would get down into product type, and working together with their material teams and production to find the best materials and to define the fit and so on. There would be a whole product development process there involving sampling and working very closely with the product creation team together with the production team. Now, today we're trying to do a lot of that digitally.

We're doing digital [inaudible 00:52:23] where we can. Most of the teams have had training in that now. That's actually great because now they're working remotely. It's still an issue that they need to pick physically, but they're at least able to continue their development process at home. Then they finalize the products, order sent, production, goes to the store or online, then the customer. Today, it's mostly going through a linear access model so the customer will buy one-off. Then hopefully use it and treasure it for a long time and wash it in a good way. We don't have so much info on that today. Then we have a garment take-back scheme, which we really encourage customers to shrink back their worn and used garments when they are finished with them.

1: That's in store, right?

2: That's in-store, yes.

1: Are all of your collections are in-store that you have control over?

2: All of our collections.

1: For take-back.

2: We have some online unique collections.

1: Oh, sorry. I mean take-back.

2: All the take-back is in-store, yes.

1: All take-back?

2: Yes. We have that in all markets today. Then it's collected and taken back by our sorting partner [redacted]. Then it goes to one of the sorting centers in their network. They have some of their own sorting centers, but they're also working with sorting partners. They're collecting globally. Then it is sorted into different categories. They're working with hierarchy. First prioritizing or sorting anything that can be reused so that gets sorted first, and today it's a lot of manual sorting. First re-use and re-wear. Then it more gets sorted down into the different grades and down to what needs to be recycled. Anything that can't be reused or re-worn would go into the category for recycled.

Then what happens, it really depends which of those categories it goes into and it depends how heavily worn the garment is, if it would go for reuse, or if it's really, really broken, then it goes for recycling. It depends what stream it ends up in. Then it

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goes more into their network on the other side of that like who is buying for the re-use side and the companies that they are then working with to find a feedstock for recycling.

1: How much knowledge or sight do you have of where-- I imagine it's quite difficult to trace where the things that you collect go.

2: Yes, it's quite hard to trace. We're working to try and get more transparency and traceability on that. In the ideal world, you would have some connected product that it would have an ID and you could really track it through this entire cycle but today we just don't have that product-specific transparency. It is a challenge.

1: What about before the materials? Maybe this is 3' expertise but the materials before they become the garments. At the moment for these types of garments would that include some recycled content?

3: Yes, it could be. The polyester part and the elastane is normally not recycled content. Polyester, it could come from either PET bottles or otherwise conventional polyester coming from crude oil.

2: I think a lot of the sportswear today now, does have quite a high percentage of recycled [unintelligible 00:57:08].

1: It can be quite high in sportswear?

3: Yes. [inaudible 00:57:16], that could be 100% of the polyester could be recycled or it could be a lower percent depending on.

2: It could be a blend.

1: Okay, perfect. Thank you. In the future, so if you go to slide two, ideally from [redacted]'s point of view, what would be different about that lifecycle for these garments in the future? If we could put aside many of the barriers that we've spoken about?

2: The traceability is one thing. Ideally, you would have a connected product that you can trace the whole way through this. Then ideally, there from the beginning, 100% made from recycled material and that it's textile to textile recycled poly, not PET. What else would be different? We're already doing the digital stuff then. Also, if it's a connected product you would know more what happens in the use phase as well and how that can also be connected to reuse models so that allows for some potential [unintelligible 00:58:30] there.

1: More sight of what people do with their garments do you think?

2: Yes, then you'd get more concrete info on what actually is the impact then as well.

1: What are [redacted] doing to try to alleviate that or to get to the point where this becomes a less gray area I guess, have you got sort of [crosstalk]?

2: We're looking into some different companies who are working with this technology. To be honest, I don't have the latest update on that. I'm due to get an update soon. It's an area that there's big potential in. We're looking into it. We are also working a lot with how to promote or encourage users to take care of garments in a good way. We have the [redacted] program and that's really looking to support customers with optimizing how you or I suppose minimizing the impact that happens in that phase. We advise for product-specific, like how to care and repair.

3: Did you say, we do also have now a second hand, online at least store I guess you can call it, so the same garment could be sold several times.

1: Okay, so that already exists, so then it would be like a building of that offer I guess?

3: That service is available in [redacted] so far, I think it's basically another company that [redacted] bought the majority of, it's called [redacted]. With that service, we collect the garments directly from the customer when they don't want it anymore and then we sell it for them online and you share the profit.

1: Oh that's very interesting. Then if it's not a re-use end of life, I'm guessing from what you said already, ideally, these would be chemically recycled is that--?

3: Yes.

2: Yes and connected back into our supply chain.

1: Would that work like a mass balance? I mean from Patagonia's experience, it obviously doesn't really work to really close the loop so that you're just returning your own material. Would you do that like buying back from the same pool if you like of material that your collections have gone into, would that be how it would work?

3: I guess to start with, that might be the way when you also really would like to tell that story and connect the dots so to say, but I think later on in a more established system for like a polyester then it might not be necessary. Then it's more of, as you say, put old polyester in there and then you take some recycled polyester from there but it all belongs to the same system.

2: Yes and to really be scalable as well.

1: I guess as well, 3-- Oh, so scalable, yes. What you said about it not mattering anymore that's the kind of the [crosstalk]?

3: It sounds boring, I guess that's also what we would like to achieve in the end, that recycling is the normal thing to conventional shopping.

2: Yes.

1: Okay perfect, so recycling becomes conventional.

3: Yes.

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1: Sorry, I know that I'm keeping you now. Just on the third slide, this is starting to think about our roadmap which is ultimately what we would like to come out of this research, it's an idea of what needs to happen and where the real opportunities are. Just from your perspective, what are the headlines if you like for what needs to happen over the next 5 to 10 years to make polyester circular?

2: I think we have to be able to minimize these barriers on circulating materials. Like when it comes to actually moving materials from one country to another, the material/clothes, that's something that needs to happen by [unintelligible 01:03:40] otherwise you're never going to get this [unintelligible 01:03:48].

1: Okay and anything else?

3: From my perspective, in the short term it's about setting up pilot plans showing that the technologies work, making some volumes available to start to change the mindsets of people, and also start to create incentives for the other parts of the circular system to [unintelligible 01:04:21]. Really establish the sorting and the collection and the logistics and infrastructure which is needed, otherwise yes, it won't happen.

1: Yes establishing the--

3: Yes, it's a challenge.

1: Setting up [unintelligible 01:04:45] and demonstrating. Okay, perfect. In terms of establishing the infrastructure, is there anything that you can see needs to happen from an [redacted]'s perspective for that to all work? That someone else needs to do. Like are there any players in the industry which could be doing more in terms of helping that to happen or is it to do with policy?

3: I think that policy is one thing. I'm sure that policy could be better in incentivizing that kind of setup. Also, other stakeholders, let's say the big polyester manufacturers today, there are not so many I think around the world. They also need to come in because they will be the direct customer of the product in the end.

1: So this is the repolymerisation that you were talking about earlier?

3: Yes exactly, they need to step up, do it [inaudible 01:06:02].

1: Okay, are you seeing any evidence of that at all, or is it not really where you would?

3: We see that some of the big players in that area that they're making partnerships with recyclers, with startups, developing recycling technology.

1: Okay that's very interesting, thank you. Okay so just finally, on the fourth slide, I sent you a definition for circular synthetics. I was just wondering if you had anything that you would like to highlight or add or edit or you think it's not quite right about these?

[silence]

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2: I think these feel fairly solid.

1: Okay, it's fine that they're good. We're asking everyone this question just to see how people view it from different perspectives and hopefully we'll come up with something which meets everyone's expectations. Perfect. Okay if anything comes to you, and you think, "Ah, no, that's not quite right," just let me know and that will be fantastic.

That's the end of my questions, is there anything else that you'd like to add that you think we didn't cover or questions that you have?

2: I don't think so, nothing jumping out. I think we've covered the main things and nothing jumping out from the definitions either that seems strange immediately.

1: Okay great. We're also asking our interviewees what we come up with, we're not quite sure right now we're going to analyze the interviews and try and see where there's some kind of different themes coming out. Then we're going to visualize it in some way. We'd like to ask interviewees if they would like to give feedback on those outcomes so if you would be happy for me to contact you again to do that then that would be great.

2: Sure.

1: Brilliant, thank you so much for talking to me today. Its been really, really useful and I hope you have great rest of your day.

3: Thank you.

2: Thank you, you too.

[END OF AUDIO]