START AUDIO

Facilitator: This recording will only be shared with the participants of the lab and will eventually be transcribed and shared in a repository, kept by the [uni 0:00:17]. One of those things that very few people actually access.

So, I figured we could just, I don't know, maybe have a quick round of how it's been for you, for this last four weeks. I didn't have any particular expectation besides talking to you and having the opportunity to share some ideas and gather feedback. And I'm quite happy with it.

But I still think there is a lot that we can still do in the future, so I think that is a [___ 0:01:02] actually, to turn this into an active community. But I think that depends also on us finding points of collaboration, points of interaction, things that we want to do together.

In my case, later today, I will just go through some of the things that I have been working with. But I would just ask everybody now to do a quick round of, how did you see this last four weeks? What were your expectations, if you had any? Do you think we could have done things differently? What did you get from these discussions?

So, maybe, I don't know, I can pick somebody to talk, and then that person can choose the next one. So, maybe we could start with Mary, Mary you are in the middle of my screen here.

Female:	Okay. Hi, everybody. First of all, apologies, I didn't get to send the thing, who I am, I got really busy this week. But I will, later today or tomorrow. And just for those who haven't met me, I think I have not met Matthew.
	But anyway, up until about a year ago, and we got into the pandemic, I was working on a start-up in sustainable retail. It was helping stores, small businesses really, get into the circular economy. But to answer your question, Philippe, for me, I have to say, personally, it was really, really good. I'm not sure I added very much to what you were doing. Probably not. But I'm happy to talk to you offline, for the next month, or whenever you need it, to give you more feedback.
	When I say personally, I had- Having spent, fairly intensively, the last three or four years in this space, and having to shut down the software company – because of the pandemic, everything was closing – this kind of got me back into things. So, it was really good, from that point of view.
	In terms of- I also- The people, you guys, it was very, very enriching for me. I feel that where I am right now, it's a bit of a bubble, close to Silicon Valley. Everything is very much tech-orientated. So, the discussions for me, they… We looked at other areas of the circular economy and of the- I guess planning for things that- And the different opportunities we can have, in terms of how we can make or help the environment.
	I will say – and it probably was a little bit me and it's practical feedback – I was a little bit, when I went in- Because, as you know, Philippe, I came in a little bit late, at the invitation of [Cami 0:05:11]. And I was a little bit overwhelmed, because I was doing a few other projects myself, with the information coming from all sides.

But it also was a lesson for me. When I had a team, they were from around the world, and it brought back trying to coordinate stuff. Philippe, I'm sure it must have been a nightmare. And everybody has their own ways of communicating. So, that is really tough, and I don't know how you can go beyond- You can do more than you did. But it's very tough, when you're look at, I guess for want of a better word, a distributor team.

What else? In terms of what everybody's particular expertise was, it was really, really good for me to hear. And also get my creative juices going. And I'll give you some more feedback. I have some notes, which are not terribly presentable, but I will give you some feedback, Philippe, on what I thought your options could be, going forward.

But it seems to me that there is so much passion out there for different projects and how everybody is going to tackle this. But similar to what you're thinking about is having one place for everybody to go. There is clearly a need for that, given we all have the one goal of making the world a better place, to how we use material products, etc.

Yes, that is it. I probably haven't given you terribly- A lot of what you need, in terms of feedback. But hopefully it's helpful, and I'll try and write you up some notes.

Facilitator: Thanks. Can you pass the ball to someone?

Female: Sorry, what did you want me to do?

Facilitator: Can you choose the next person?

Female:	Oh, look at you, putting me on the spot. Okay, I guess Mark, you're up.
Male:	Cheers. (Laughter) Thank you for that. I mean, for me, it's been interesting, again, just to reconnect and see and hear some of the different stories. As you know, I've been working in and around this space with the photography that I've been doing for probably nearly five years now, but this last year has been quite a challenge. Because most of the events I'm involved with are community-based events and they have pretty much all stopped.

Although we did actually manage- Was it last night? My brain has gone completely dead, it was last night or the night before. The Restart Project actually managed an online event, talking about, what can we do to better improve fixes to things like printers. There are all sorts of things going on, which we managed to connect with. So, that was good, I reconnected with a few people I haven't seen for over a year, as a result of doing that.

I think, when I look through some of the boards that you created, most of the stuff that I would- Most of the stuff really, really resonated. And it got me thinking, at the end of the day, this is like trying to push water uphill, would be the best way to describe it. What else do we do?

And, Philippe, I know my thoughts were all about you've got to look at the whole eco system, you've got to work out what the policy and the bloody fiscal financial incentives are, and how they can be used to then promote a whole range of different activities.

But I was thinking, we're not just going to go and change fiscal and regulatory policies overnight. You know, people like [Kyle,

at iFixit and the people at the Restart Project and [Artois Europe 0:09:32] are all trying to do that, and making some headway. I was more thinking about what could be more done at a community level.

And the one thing that did occur to me, that- And again, I was thinking in terms of your information platforms, and how do we make things accessible to people. The thing that occurred to me that probably I haven't thought through, and I'm not sure you've got captured in the notes anywhere, is some of the stuff that is applied in the sort of solutions journalism network.

Where the whole idea is you create somewhere, a platform, to just share things that have worked somewhere else. So that other people don't have to go through the same learning curve. Or it inspires other people to go, "Hey, if they can do that, we could do that." I think that is something that we could do a lot more of in the community.

And the stuff the Repair Café do and the Restart Project do and iFixit do, and all these other organisations, I don't see anywhere that it really connects, and connects well, that would allow reuse communities of the future to just get to see stories, get news, get ideas, share what they've done, so other people can pick up on it, so there is like this organic growth.

So, that is one thing that I thought we didn't really- Certainly, in any of the discussions I had, we didn't discuss, that might be a useful add-in. And the important point here is- I don't know how familiar people are with solutions journalism. It's not about telling what I would call the sort of glossy, end of news, bulletin, good story, it's about something more fundamental than that. Which is proper investigative journalism.

But it's slanted around doing what most news articles do, which is talk about the problem. It talks about actually solutions

that have worked and why they've worked. And I'm just going to put a link up here. I've actually just joined this group as a result of this, and I'm going to look to see if I can pick up some of the tools and techniques that they use. Sorry, I've just dropped it in chat. About doing this in a much more positive way.

And interestingly, I've noticed that some of the journalists who seem to work in this way are people at places like The Guardian in the UK. And they are also people who are very supportive of environmental and sustainability activities. Probably my biggest takeaway is there is a gap there that really needs to be plugged. Because everybody is sort of still working in isolation. Does that make sense?

Facilitator: Thanks. Yes, it makes sense, I'm just having a look at the website as well. Can you point the next one?

Male: Well, I'm just going to look at the next person I can see, and it's Cami. (Laughter) You're just the next person I can see across the screen.

Female: I guess I'm up, okay. Well, this has been really great for me. I've been doing over a lot of ideas about reuse, about changes I want to make as a lifestyle. I'm not fully sure if I want to embrace it for a career, I'm thinking through some of those things.

But what has brought me to this point is wanting to purchase less and be more cognisant of the things that I have and how they could be used, or reduce my footprint in some way. And not being able to really find stuff, so trying to come up with

making stuff, or using some of those tools I've learned along the way, through growing up in a house where you make things. Or just applying creative-

I was trained as an artist in art school, and there is a lot of creativity that can come together through that. But also working in software now, how can technology come into that? And I think, Philippe, you're hitting on all of these things, around just like, "Yes." And I haven't really felt like I could say that in many circles of people, because usually there is only one perspective coming together.

I read your blog post about there is human/computer interaction, as well as a little bit of activism, as well as- The other one is not quite coming to me right now, but… I just feel excited about these concepts all coming together. And like Mark was saying, solutions journalism, or some kind of way to pull in all these different concepts-

Right now, I feel like I'm still percolating, it's not really coming out in a clear, concise way. But it's just been great to be a part of these discussions and find people who are also interested in these topics. So, thank you for that, and more to come, I hope. Multiple people on this, it would be great to- I don't know, like you said, how to continue the conversation or at what frequency, but I would be interested in something along those lines.

Facilitator: Thanks. And just a quick note here, we will probably hear a bit from Matthew, but I'm also talking to the network that Matthew is part of, that is [Ask Net or Ask Co Net 0:15:05]. There are a number of repair initiatives in different parts of Africa. And they were supposed to propose a presentation, or something like

that, which didn't happen until now. But I guess it will be the next event that I will invite everybody in this group to join.

It will not necessarily be a part of my research because of the constant forms and the specific time, but I think it's useful to engage with them. Because they are this kind of distributor network working in different parts of Africa, and coordinated with people in Brazil and here in Berlin, and it is this kind of international perspective on that. So, that may be an upcoming meeting in the coming weeks.

Female: I'll watch [___ 0:15:57] for that, thank you.

Facilitator: Cami, who is next?

Female: I see Hugo.

Male: Hello. So, it's been nice to be able to join everyone and get to meet a few people, to see [Ria 0:16:14] again. I think these are topics that I was interested in and I've been trying to work on this on my own as well, with the digital bunkers and the projects that formed Cyber Local Dreams. In that spirit, I have starred the little [discord] that I shared the link to.

And that has also been me trying to make sense of the situation, knowing that I'm not doing it as a research project, so it's been slightly slower. But there is a wealth of knowledge of references, on solutions, on the back of the chill bunkers. There was someone who started trying to live on his own since, so it's the kind of thing that I am enjoying and I feel is missing.

The reason I am speaking about this is that I feel like we're still missing a connection with popular culture and narratives and myths and mythologies around this. Recently, for the past 5, 10 years, I've been trying to keep track of when maker themes show up in movies, whether it's in The Founder, the movie on McDonald's, where they prototype the fast food environment, or when it's Spiderman making- I think Andrew Garfield makes their own Spiderman suit, at first.

And I know it's not purely repair, but to me it has- At least that is my conviction, it has to really pair to finding new narratives that make it interesting. Not that has to be entertainment or purely exciting, but I think it can add a lot to the discussion around repair, if those aren't part of all the marketing that gets thrown at all the other products out there.

So, that is one thing that I would have loved to have explored more in this group. Otherwise, to Mark's point, being able to hear more about the relationship between repair and the city. I think, to me, I would have been curious about. So, how it gets incurred in brick and mortar shops, or how it gets invisibilised, maybe by mailing your services.

And getting a better sense of all the different kinds of solutions out there. And what is the relationship between repair and the cities? Those were the two things that I think, in chapter two of this, I would have enjoyed seeing.

But I'm more than happy to also contribute to making it happen, and that's what I'm trying to do also, so I'm not putting it on you. That is my feedback.

Facilitator: Let's think of this seminar pop culture with everything. And I am also interested in mapping, identifying occurrences of

repair in pop culture. And reuse. There has even been some discussion about it on Star Wars and references-

Male: How to Train Your Dragon, I think, has been really consistently making it part of its narrative DNA, which was really nice. But I have a list of these movies that I- I have a WhatsApp group with some friends, I can send you a few.

Facilitator: Cool, great. Okay, who is next?

Male: Matthew, would you like to go?

Male: Yes, sure. Hey everybody, I hope you guys can hear me. I am really so happy to be, once again, in this discussion. There have been some good days. I missed some of the discussions which have been on. But today I feel so happy because I am on.

Since the beginning of these discussions, I have learnt a lot [___ 0:20:07] from the team, from Mary, Cami, Mark. I really learnt a lot of these from all these discussions. I have been offline for some good days, but the times where I was offline, especially here in Uganda, I was able to look around.

I am in a city called Arua, where I notice things [___ 0:20:41] electronics is really not taken into consideration, especially in terms of its reuse. Most of the things that I saw around, people were concentrating in reuse of plastic materials, which has been so active. But I suppose this is because I think the companies that manufacture these things are able to reuse

such kinds of things, the plastics, in a way that they normally buy.

They buy from the people on the ground, people who collect this plastic waste, and then they sell that to big companies, that takes them, refines them and turns them into something else.

Coming to motor vehicle tyres, the main thing that has been put in use is that people in the community, they turn these motor vehicle tyres into- They cut it and make sandals out of this material for tyres. Which has put part of it to be use. But you find that some of the waste, they just burn it, which causes some pollution to the air, which is a bit disturbing, especially to the environment. You know, burning such kinds of things, it is very dangerous today, to human life. Once someone inhales the smoke, sometimes it can cause diseases and make someone sick.

But then the biggest selling is on the part of the electronics, where a person that does repairs finds that his room, or the small room that he has, is just filled up with the scraps, with things that are not working. That gives me a question. When this person continues doing their repairs, what happens when his room gets filled up? Does he take these things and throw them out? And if throwing out, where does he take them, to throw them out?

Facilitator: Yes. So, there is no out, right?

Male: Yes. It's like a- Anyhow, someone parking a huge amount of broken devices, then he is a repair guy. But what next, when his room gets filled up? That becomes a big question to me. I

am still thinking of now bringing this idea of the warehouses, or stores, that can collect such kinds of materials from these people doing the repairs. [___ 0:24:07].

Now, the other thing I was thinking about, ___ things concerning boards, or things concerning broken screens. What if now- If there are spare screens and spare motherboards that can be bought, fixed in those broken screens, and make it work again? I was just thinking of things like that.

And then the other thing was thinking of, what if now we make use of- Or reusing this board, especially of other things. Let's say, for example, computers. For example, computers. In case the motherboard got damaged, can't we get a way of reusing or scrapping off everything that is maybe on the board and turn it into something? Maybe soldering a few devices, getting some few devices from other dead electronics, and then soldering it into a fresh board.

Sorry, just looking at this thing. But the other thing is to- The issue of the awareness. Because now, in Uganda, there is no awareness of the use of electronic devices. I haven't heard even journalists- The media tend not to look into bringing this up. It's just neglected. They keep on taking shots on waste. But on the side of the electronics, they haven't got into these repair centres or repair houses, to capture or to take stories from these repair houses, and bring them up. So, if we can-

Facilitator: I think there is some work that has been done in other places. And one of the things we can do is to share these experiences. Both in terms of reusing refuse from electronics that can [___ 0:26:40], as well as thinking of structures. But yes, I think that can come into these next phases of comments that I will ask. But I think let's just try to finish this first round. So, Matthew is

12

there anything else you want to add right now, or we can invite Ria to talk?

Male: I think basically those are the things that I would like to add, yes.

Facilitator: Yes.

Female: Hello. I hope I am audible, my internet is super choppy today. I attended only the last session, where just me and Philippe met, and spoke a little bit about ideas around this topic. And I really wish I could attend more sessions before but, due to the time restraints and all things happening, that wasn't possible.

But I've been looking through everybody's work and notes and the videos that all of you have been sharing, and I think there are lots of similarities. Firstly, the group gives me a lot of validation for the ideas that we, at Matrix, have been discussing and just exploring generally. So, I think that is very nice to know.

And generally, it's so great the everybody is talking about building things together, rather than just doing them in isolation. And just having that actively as a thought is very cool, and I would love to see if we could do that together maybe through this group, and maybe if we can continue it in some aspect. That would be really, really nice.

And I would love to see, Philippe, where you research goes and just extensively how you are able to map this into- And connect it to cities. That would be very interesting. Because we have been looking at more community-based things, and trying

to see how this would stand out in a city would be very cool. Yes, I think those are the few things. Yes. Thank you. Thanks for doing this and bringing people together.

Facilitator: Thanks Ria. Yes, I think that is also the perception I have, there is a lot we can do together but we still have to find the best way and adapt to time zones and different levels of experience, so as not to push too much, some of us, or not to slow down others. And I think there is room for that rhythm to be found with all of us.

So, with regards to my research-

Female: I just have one question, sorry.

Facilitator: Yes, please.

Female: The videos that you sent, like the recorded presentations, all the people here, you said they are available only until Friday. Is there any possible that we can view them maybe for a couple more days?

Facilitator: Yes, I can extend that. And one of the things that I decided is I will extending that for another week.

Female: Awesome.

Facilitator:	Also, what I'm doing right now is- Let me just share this [Miro board 0:30:20], that I will present to all of you. And I would like to use that Miro board also to collect feedback on my research. So, if you allow me, I'll just spend five minutes, I guess, presenting what the structure is.

I don't know how familiar you guys are with Miro. It is this corroborative- I know Hugo has been using this in a very intelligent way, much more advanced than what I do. Miro is this collaborative board in which people can add comments and Post-its and draw things and add content.

And what I'm doing is to use this Miro board, that I sent you the link to, to present a bit of what I'm doing in my research, alongside these conversations, these meetings with you. And to open space for every participant of the Reuse City Lab to give me feedback on [___ 0:31:35].

So, I am focusing on three different prototypes. One of them- And two out of three are totally fictional for now. So, as I guess I have already confessed, I don't know exactly where to start, to do, for instance, the universal registry of things. EI, the evaluation interface, is something that I am experimenting with on my workbench here, with sensors and some of those electronic gizmos that we are supposed to use in my project.

And the transformation labs are something that I will pursue later in my research, when it comes to work on policy and points of recommendations.

But what I did here was this short explanation on what are these three ideas. So, I can start. On each one of them, you can see that I am asking you to contribute, by adding Post-it notes, comments, URLs or any content in the areas below. You can also add comments that are no related to those areas specifically, but [___ 0:32:49] ideas.

___ and more, so you can check here the website, where there is the first version- Let me just unlock this thing. The first version- Where is this? You see, I am not that used to it. So, [if you check 0:33:10] here, the website. If you look here, you can see the website where I started with the [news]. In each one, I have some different fields to comment on.

So, for the universal registry of things, that is this idea for a distributive database about how to reuse things, with information about repair and manuals and stories about upcycling or other repurposing of these objects.

So, I am commenting- I opened four fields here. What is the universal registry of things? Why I think it is relevant, or it is needed. Who will interact with it? And how it will work.

If you go to this field, for instance, it says the universal registry of things would be a trusted source of information about how to reuse things. And any of you can add, for instance, like here, write a Post-it Note and say, "This is lame, it does not make any sense. Go away." Your own comments here. Sorry, I will remove that one for my editing. But the idea is to collect feedback about all of those aspects of the universal registry of things.

Here, the same. Why? The main motivation to create a universal registry of things is to offer an easy way for interested parties to assess the potential reuse value of things. What do you think about that? Again, you can add comments here, you can create Post-it Notes, you can paste URLs or other things, you can draw things. So, this is like this open space for everybody to comment and to post your own reactions to this idea that I'm working on.

Who? So, these are some of the potential users I see for the universal registry of things. So, individuals, community

initiatives, repair professionals. Who else do you think-? Or who are those people?

And here, how. How it would work, how to integrate existing but sparse sources of data. What are the conflicts that may arise? So, we know that manufacturers are not necessarily interested in having users accessing all of the information about how to reuse stuff or what the materials are. And then, what are these conflicts, and how we could [___ 0:35:51].

Again, for the evaluation interface, it's the same, so I created here four fields. One of them is the expected behaviour, user profiles, performance scale and scenarios, for these technologies. So, who would be the user profiles? Who would be the users?

Here is the expected behaviour, so how this machine or this technology would work. How it would work on different scales, so from a Smartphone app to a kiosk on a city scale, like an ATM or something like that.

And some of the scenarios. So, this is what I'm actively prototyping, particularly this one scenario in which I have an articulated arm in my work bench with a camera, that recognises objects and spits out information about how to reuse.

And I know this is- I am going very quickly through all of that, but I invite you to spend some time on it and interacting, however you see fit. And I may be sending, I don't know, a poll or a survey. So, if you are not comfortable interacting with this specific way of interacting, which I find can be very creative, but also scary, to interact this way, I will have also this other, more [___ 0:37:26].

But I would welcome everybody to just spend some time on this Miro board and post your comments. And you don't need

to be afraid of messing things up, because I have back-ups. And I will be happy to have your feedback.

Again, so this is the last part, the transformation labs, which would be this infrastructure of these public spaces, in which people could have access to second-hand materials, but also tools, to act on those materials. Then they are here. Fields for identity, equipment, governance and space. And in each one of those, I am open for specific questions.

And again, I am sorry that this is so wide and perhaps hard to grasp, but this is the current state of my research. It is kind of messy, in a sense, but totally open to get feedback.

So, this, first, is an invitation album, I have sent the link to this Miro board to the mailing list as well, and to the [diagram 0:38:40] group. If you are able to interact with it, I would be happy to get your feedback in this coming seven days on that.

Yes, that is the state that I'm in. As I said, it's not streamlined, it's not straightforward, but it is the current mess that is in my head. Actually, there are many more layers to it, and I think I will add some information to it, as the week goes.

Female: I think it's a very organised way to look at the mess in your head, because it doesn't look- I mean, there are lots of arrows, but it is very categorised and… You know. Anyway, it's exciting.

Facilitator: Yes, I'm a Virgo. Even when I feel messy, it's not that-

Female: Yes, you would be. So interesting.

18

Facilitator: And there are some discussions, I guess. For instance, that
                one on [troops 0:39:51] in sci-fi, about videos, I think it would
                be amazing to bring that, for instance, to these scenarios, on
                these machines. So, this is actually the current incarnation.

                I have a [Raspberry Pi 0:40:03] with a camera and the screen,
                and I have a unicorn here, that I found on the streets ___. And
                I am trying to say this Raspberry Pi, this object, and I will
                create information here on what that is and how to reuse. I
                don't know exactly how to reuse a [___ 0:40:23] unicorn, but I
                will surely find a way to do that. Maybe Ria can help on that,
                helping me reuse a unicorn.

                Yes, so I think there are other layers of discussion that can
                arise from that. And I am also documenting everything on that
                GitHub repository, all of my findings. And eventually, if there is
                code or images of the developments, I will try to keep
                everything there. I'll just stop sharing this.

Male: Thank you for sharing. I think, from my side, what I'd be most
                interested in is to do some of what Mark was talking about,
                and seeing how things that work somewhere else, how do you
                test their suitability or their relevance in their context? I'm sure
                that can take many forms. But being able to say, "Okay, we
                have this solution over there. It took this long. Or it is situated
                in this kind of neighbourhood, or in this proximity to other parts
                of the city."

                Trying to almost unpack the magical recipe. And seeing what
                needs to be addressed differently, what needs to be tweaked.
                Or if altogether it might not be able to work, I don't know, in a
                place like Los Angeles. But this kind of dynamic of aging the
                relevance of these case studies, to me, would be something

really valuable. And I guess maybe it can fit in one of your three buckets, I feel, maybe the third one. So, yes, that is, I think, what I would be most interested in participating in.

Facilitator: Yes, I haven't brought this up today, but one of the expectations I had was to get a closer look at the experiences in [Nantes 0:42:38] over these last four weeks. Unfortunately, that didn't happen yet, but I still think there will be the opportunity to do that soon.

Because the person that I know could not come last week, because of health. And today, that person is in another event. And I have sent a request for interviewing the person who runs the training programme on [___ 0:43:11], and this is something- Because as I have seen those things happening in the field in Nantes, I would like to understand how they came to be and what were the steps before that happened.

So, this is one of the things I still want to do as part of this study, even though it was not possible, these last four weeks, if that makes sense.

Male: Okay.

Facilitator: So, I don't know, maybe we could just talk a bit about, where do we go from now? I already mentioned that I want to do this day of presentations with people who are in the same network as Matthew's. And maybe- I don't know if you have ideas of other things that we could do together.

As I mentioned, I guess I see even a seminar or a conference taking shape somehow. But may, I don't know, can we think of concrete ways to collaborate, in the near future?

Male: Before we move on, are you aware of the different repair conferences? I think there is one called [4S 0:44:35]. I am trying to find them, but have you been looking at those as well?

Facilitator: Not yet. I know there is this group in the US, called The Maintainers, that some of you may be familiar with.

Male: Yes, that is one of them.

Facilitator: Yes. I have been following the discussion [___ 0:44:58] at least. And there are some interesting panels usually on the 4S, the Summit for Social Studies of Science – if I am not mistaken, that is their name – that try to put together these critical perspectives on society and communities and science. And of course, there is the [Fix Fest 0:45:30], hopefully there will be another edition this year.

Male: And the Festival of Maintenance in the UK, does that ring a bell?

Facilitator: In Liverpool, right?

Male:	Is it? I don't know, I only have the link.
Facilitator:	Yes, I remember someone who was in Liverpool told me about that festival but I don't have very specific- Actually, I was supposed to be invited to the Festival of Maintenance last November, in Liverpool, if it's the same thing. But then it didn't happen because of COVID.
Female:	Just in listening the last four weeks, one thing that resonated was using somewhere- And I think, Mark, you mentioned- I can't think of the name of it, let alone I can't pronounce it, I think it might have been in Helsinki. Where it could- The actual location, which was the beginning to end of an object, could act as a blueprint.
	And I'm wondering, Philippe or anybody, have you looked at places that you use could that as a prime example, and copy that blueprint, if you like, to other areas? And I know we also looked at, culturally, places are different. And then they accept something, may not another.
	But for the most part- I was on a few calls on thrifting during the week. And for the most part, people, no matter where they are, need to be, for want of a better word, led or told what to do. And I feel, having, again, blueprints for how an end-to-end operation, from the beginning of a product to the end of a product, in whatever form it takes during that process, is valuable to any community, city, town.
Male:	I've just posted the Helsinki place up in the chat.

Female: Thank you, Mark. [___ 0:48:05].

(Laughter)

There are eight of them in the city.

Female: Okay.

Male: And some of them are specialised. Most of them are generalist, but there are one or two that are specialised. So, one just specialises in- I say specialises, it's where they send all the white goods.

Female: That's great. I see how that would work, because there is the idea of mixed- You know, with products, mixing synthetic with cotton, it's a mess, that type of stuff. So, the specialisation helps to…

Male: Yes. And they have people literally sorting that stuff by hand, as best they can. Apologies, folks, I'm going to have to go. I've got emails telling me I've got to go to a meeting with some lawyers.

Female: Oh.

Male: Yes. (Laughter)

Facilitator:	I had one this morning too, I had a meeting with a lawyer this morning.
Male:	I've literally had two and a half, three days- No, actually, it's nearly a week solid, and I don't think it's going to end for a long, long time. Yes, I've got to go, they are pinging me, saying, "We need another meeting." It starts at 5:00. I could really do with grabbing a drink before I start my meeting at 5:00. So, apologies, everybody, I've got to scoot. Great to speak to you all.
	And yes, let's stay in touch. As I said, I think one of the most important of all of this is it's about sharing knowledge, experiences, ideas. The more we do that and the more those ideas therefore get to propagate and spread, the greater the chance that actually something will shift. So, with that, I shall be off. Good luck, everybody. Cheers. Cheers, Philippe. Have fun with the Philippe, mate.
	(Laughter)
Facilitator:	Don't mention it.
Male:	Don't worry. I've been there, done it, you'll be fine. You'll be fine, just keep at it.
Facilitator:	Yes. I think I'll survive.
Male:	Yes.

Facilitator: [___ 0:49:59] so far.

Male: Bye.

Male: At this point, Mary, of the blueprint, I think it's been really interesting to follow the Precious Plastic journey, even if it's not purely on repair, but more on reusing plastics. And how they have gone from refining their machines to making them buildable in different contexts, to now documenting the business models that are developed around them.

So, that is one, I think, that has been really interesting to see grow, and see that, even once you have a blueprint, you're not out of the storm yet, and things aren't resolved just yet.

And the other one I've been looking at is participatory city, which I've shared in the chat, which is in the UK, but seems to be trying to share how they make a participatory city. But I think a lot of it has to do with regaining autonomy over means of production as much as you can at your neighbourhood level, and maybe those are two good starting points.

Female: Yes, thank you. I feel that the whole plastics thing- Sorry, I think I interrupted somebody. I apologise. But I was going to say, the whole plastics and the sea became quite sexy in the last few years, so it gained momentum. And the idea of turning plastics, as well, into mugs and whatever, and bags and that, I think- And it had the fashion side of things as well.

So, in some ways, that helped. And it sort of was an offering that a lot of big corporations were able to add on to what they

gave. Unfortunately, it tends to have to have a bright star attached to it, before you get momentum.

Male: I was specifically speaking about Precious Plastics though.

Female: Oh, okay, got you.

Male: And their work on documenting their work.

Female: Ah, okay.

Male: So, I agree with you, that sometimes it feels a little limited, but they have put an extensive amount of work in, in open sourcing their machines. And the way they had designed them in The Netherlands wasn't really easy to make, for example in the US, then they made a few versions. And now they have started documenting their business models.

So, when they assumed that everybody would have all five of their machines, they are realising that now it works much better if you only have a sheet press and an industrial granule maker, for instance. So, there has been a really nice amount of fine-tuning of the blueprint, is why I was bringing it up.

Female: Interesting.

Male:	But I completely agree with you with plastic and how glamorous it is these days, so [___ 0:52:57].
Female:	No, I appreciate that. I'll look into that, actually, yes.
Facilitator:	I think I remember something recent, of them becoming a foundation or something like that. Do you know what that was, Hugo?
Male:	They are called One Army now, because they are- Dave Hakkens, who was behind it, was also behind Phonebloks and Project ARA. So, he made the viral YouTube video that got Google to eventually try and make a modular phone. But he has been this sort of product design-type influencer for a little while.
	But he is now- Precious Plastic is kind of out of his hands, and now he is working on Project Kamp, which is this sort of autonomous community. So, I think, in the spirit of having an umbrella entity that could host all these different efforts, he has founded One Army.
Facilitator:	I remember some years ago I was working with this co-op in Brazil and we were considering doing something related to Precious Plastic. And I was surprised to see that, not only they had open source, they had schematics to build the machines, but also there were people in Brazil who were manufacturing the parts, based on their specifications. So, you can buy the parts to do-

It's mainly people- I don't know, students, maybe engineering students, or design students, who have access to fab labs and they built machines to build those machines. But I was surprised to see that scene happening. I don't know how big it is, I don't know if anybody ever bought one of those kits, but I was happy to see that they were on offer in Brazil.

But then this co-op decided that they were not- They still need to start by purchasing a conveyor belt, so they can sort out the materials that they have, and then, only then, they will think of transforming the materials into something else, instead of just selling everything.

And this is another thing that I will share in the coming weeks. I have interviewed the person who runs that co-op, the leader of that co-op, in Portuguese. So, I will eventually translate and post. Because I made some- Some more needs to be shared about the real conditions about recycling in Brazil.

Sometimes it's used as a victory for the circular economy types, saying, "65% of aluminium is recycled in Brazil," but their working conditions are really precarious. And I have been trying to push that story out, also.

Male: I have shared one last link. I didn't want to hoard the conversation. But Common'hood. Speaking of popular culture, blueprinting and co-ops and maker culture, it is a kind of SimCity alternative, where you run your own maker-space [squat 0:56:15]. And it's still in ___, but if you go on their discord, they are giving out testing keys.

And it's just a really nice game environment, where you start by building a few chairs, so that you can then buy some equipment to build a robot arm, and do these other things. It's a very small video game, because it's been done in University

of Detroit, so it's just done as a PhD there. It's a really nice project.

Female:	Philippe, could I ask, it seems a lot of project start- Perhaps an example being part of the PhD that you mentioned in Detroit there. My question is, a lot of brilliant ideas, but they lose momentum when it leaves the community where it's incubated, and doesn't become viable.

With your research, Philippe, are you seeing areas that are getting momentum beyond this early stage, or even small business stage, going beyond that? And propagating to a larger population. And when I say, is it-? Is it perhaps in electronics or perhaps in bicycles or-? Is there…? It's more trends, I guess, I'm asking, in many ways.

Facilitator:	What I would say is that, I don't know, sometimes you spend part of your project time doing things that are not exactly what is needed. So, in my case, I have been working with this particular lens of setting up a prototype of a machine which is not what I'm interested in. I'm much more interested in these conversations and real collaboration.

But what I will try to drive my research into, in this next phase, after I'm done with prototyping, is to think in terms of how to understand the genealogy of those projects that I think are particularly successful. So, I have this example that I keep returning to, of the circular economy initiatives in Nantes.

And I am actually now, after seeing Mark talk and his features of [___ 0:59:04], I am interested in that. And I think that can be a way to make these things more sustainable over time.

Not sustainable in terms of environment, but sustainable as initiatives that go beyond the pilot phase.

Two days ago, I visited this place here in Berlin that collects materials, mostly from the industry or [all kinds 0:59:31] of donations and offers at a very affordable price, for artists and crafts people. But they are in a place that they will need to evade by the end of one year. And this seems to be, I guess, what happens in many places.

So, you create this very interesting space for things to emerge, but then they have to move away, or they have to become commercially-viable initiatives, and those things sometime are incompatible with doing what is really needed.

But the opportunity that I see, from everything that I am reading, is the extent to which legislation on right to repair is being implemented. And hopefully, there will be a wave of influence throughout the world from what the American government is doing, pushing this agenda of even not acknowledging this agenda of [a part-green new deal 1:00:46].

Even if, after four years, that is reversed again, I think there may be an influential effect. As I think I mentioned in one of our meetings, if you go to a small place in Brazil, ideas that were popular in big centres some years ago are still being implemented there. So, these kinds of influences can be mobilised, to turn things into real initiatives in the territory.

So, yes, I think there is this kind of paradox of doing interesting pilot projects, that never move beyond the pilot phase, but even then, they can be influential in other senses.

Female: Yes.

Facilitator:	But, as you and I guess Hugo mentioned, this idea of having blueprints and unpacking the success stories and maybe coming up with ways to turn them into toolkits that can be hopefully applied virtually everywhere in the word, is interesting.
	And I have had this experience last year of this course, which I mentioned in one of our meetings as well. An online course, offered for free by Coursera, that was called Waste Management in Developing Countries. And it was interesting, because they had this very simple to understand perspective on waste management systems and how you could do a waste management system, even in a small city somewhere in the countryside of Brazil, in a poor state of Brazil.
	So, it was interesting, the way that they framed this system of waste management and how you can reproduce. Even if you don't have a lot of money to invest in technologies, you can start with low tech and you can start with things, perhaps sorting by hand, and then things start to evolve, if you go in the right direction.
	And I guess it gets back also to the discussion with Mark – where to start, if you want to promote eco system change? Sometimes it's just a small change that can influence others.
Female:	Philippe-
Facilitator:	Go on.
Female:	Excuse me, sorry. You mentioned having, or at least building, an ongoing dialogue through a community. Is that still on

your-? I'd certainly like to be part of it, if you are moving forward in that direction.

Facilitator: Yes, I think we have had some interesting- While I think still in the early stages, there is some interesting exchange on the Telegram group. But I know that not everybody is comfortable or familiar with installing another app. So, I think we could [___ 1:04:11] it directly through the email list, which seems to be, I don't know, more open to a wider public.

And as I've gone through this first stage of research, in which I was required to ask everybody to sign the consent form, I can just declare that, now, this phase is over, and I am not collecting data for my research anymore. And then we can open that mailing list also to other people, who may be interested in interacting with this group of people, even if they are not interested in signing a consent form and having their data gathered for research.

So, I would use this specific- I think we would use the mailing list to keep interacting, and hopefully think of other ways to exchange in the future.

Male: All is good. Thank you for setting this up, Philippe, I think I am going to hop off. But it was very nice to see everyone, and I hope we can stay in touch. I will be keeping an eye out on the Telegram group as well, and see what happens.

Facilitator: Cool. And I will send out the link to the Miro board through email. So, if anybody can have a look and comment for me, Post-it Notes. So, ruin everything and delete everything, I will be happy with that.

Female: I do have to drop off. Thanks for everything. Nice meeting all of you.

Female: Likewise. Thank you everybody. Thanks, Philippe.

Facilitator: Thanks, everybody. So, I guess we can continue the conversations through email, and then let's see what emerges from that. Thanks everybody for joining this and I will stop recording our last meeting.

END AUDIO

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