I = interviewer; P16 = participant. Refer to DDM2020 dataset documentation for more information.

1 2 3	I	so yeah let's get started so erm you briefly told me by email erm which product you wanted to talk about could you just remind me what that is
4 5	P16	okay so the product as as a physical object the product is is simply a a hundred percent recycled plastic cup
6		i've got one just here very boring looking
7		but it looks just like the disposable cups that
8	I	yeah
9 10	P16	you see elsewhere except maybe with a slightly greeny or bluey tinge
11	I	mhm
12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27	P16	erm but really the the actual product is more than just the object itself it's the service we wrap alongside it and in this case this product and service is an example of other products and services that we could deliver erm using the same sort of system if you will and the system is that a bit like a rental or lease model we consider these to be our cups we don't want these cups to be thrown away or to go into some other waste manager's bin or or to er god forbid end up in the ocean or landfill you know we want these cups back so our our whole system is that we provide customers with the cups erm now initially that was done our business itself sold the cups and the waste management now actually what happens is we partnered with one of the world's biggest packaging companies they provide the cups we provide the waste management
28	I	ok
29 30 31 32	P16	erm but the two services are linked you we can't buy one without the other erm in in the hope to ensure that this product can be captured and recycled again and so so that's that's the sort of that's the product
33	I	mhm
34 35 36 37 38 39 40 41 42	P16	but in in implementing that there are lots of sort of tricky decisions that had to be made er first off erm our our partner ((name)) who developed this cup as an as an individual he started his own his own business seven years ago and and forced a and you know worked with some some manufacturers and got them to produce the first hundred per cent recycled pet cup now very silly that that was done by you know an innovative individual and not one of the countless large companies

43 that produced these cups cups of this type and were for 44 some reason only dabbling in the sort of twenty thirty 45 per cent recycled range and the reason for that was 46 that they were making the decision that no one really 47 you know that the the customers etcetera didn't care 48 enough to demand you know that it wasn't worth the 49 hundred percent recycled plastic and that they could 50 through essentially deliberately poorly communicating 51 how much recycled content they had in there they could 52 say this contains recycled plastic and hope people 53 assumed a hundred per cent rather than ten 54 Ι yeah 55 P16 and so you know but the decision of going for a hundred 56 per cent recycled plastic does come with its with its 57 own caveats and and difficulties you have to be really 58 you know careful about sourcing your material and 59 keeping it at high quality 60 Ι mhm 61 P16 and so that's you know that's a big part of the sort of 62 you know the process of then capturing it erm and and 63 of course the you know the other thing that's that's 64 interesting for us about this sort of product is that 65 generally people don't recycle thermoformed er plastic 66 products at the moment even though they are recyclable 67 as as our system proves you can take this and we can 68 make this back into this but and it's it's PET which is 69 in theory again one of the most recyclable plastics if 70 you look at the recycling rate of plastic bottles 71 people are recycling those left right and centre 72 Ι yeah 73 but they don't recycle these because of some really 74 stupid reasons which is that waste managers don't have 75 grinders that are set up for this weight of plastic so 76 they don't bother erm and erm also that thermoforming 77 does damage the plastic erm er polymer chains more than 78 blow moulding in bottles so the the PET material in 79 plastic bottles as well as being denser and thicker is 80 also slightly high quality so generally everyone's just 81 focused on recycling bottles 82 I mhm 83 but of course that means that masses of thermoformed 84 packaging is going out onto the market that is entirely 85 recyclable that is not being recycled 86 I yeah 87 P16 erm and so obviously we had to design a system around 88 trying to capture this material and feed it back into

89 these recycling processes and identify recyclers that 90 would be able to process that material for us 91 yeah 92 P16 erm and so you know that was a things and no you know 93 obviously lots of people pushed us on this journey to 94 sort of go for oh well you know it's easier to go for 95 ninety per cent recycled and ten per cent not to get 96 for example the clarity because 97 Ι yes i 98 one of the other things is that the big breweries 99 alright the the biggest consumers of these products are 100 the are the major breweries and they have all sorts of 101 stringent requirements around their branding and 102 appearance in fact one of the brands has this obsession 103 with what they call the the perfect pour and that's 104 sort of summarised by being able to see all of the beer 105 fill up in the cup and it all you know looks great and 106 that's part of their whole branding 107 Ι уер 108 P16 and of course that requires having perfectly clear cups 109 which is quite easy with virgin plastic and 110 I yeah 111 P16 harder and harder the more recycled plastic you go 112 I yeah 113 so in order to sort of in theory and some of the people 114 that we initially partnered with in this project 115 although we ended up cutting these partners because 116 they didn't share the same environmental values that we 117 did were quite keen to to bend on that and to in in 118 order to attract these these you know erm big customers 119 Ι mhm 120 whereas we thought well we don't like that we think 121 that that compromised our message erm i actually also 122 think that it would have in the long run devalued er 123 well i know that it would have devalued our proposition 124 to these clients because at the end of the day it is a much more effective story to consumers to be able to 125 126 say this cup is a hundred per cent rubbish we haven't 127 used any new plastic to make it we are taking waste 128 from the world and we are making it into a new product 129 that you know out of by then removing masses of waste 130 in the process and that is a very easy you know very 131 good and easy story to communicate and so that's why we 132 thought that should be a cornerstone of all of our 133 brand

134 I yeah you mentioned your environmental values would you 135 say that the decisions you're making erm in this 136 project are very much driven by your own personal 137 values 138 P16 absa absolutely i mean at at the end of the day we you 139 know we have we've got into this this industry and this 140 way of thinking and doing things because not because 141 this is the the sort of you know best industry for us 142 to be in in terms of of making money erm or what it's 143 because this is where we see that we can have the most 144 impact 145 I mhm 146 you know erm and scale of impact we could see that 147 there was masses of this amount of waste going on with 148 a relatively simple design solution to fix you know 149 personally what i would prefer to be doing with my time 150 and and almost what i started with was was designing er 151 kind of fun luxury high end products out of recycled 152 plastic but i wasn't going to reduce the amount of 153 waste in the world by designing a few high end you know 154 pieces of furniture 155 I yeah yeah 156 for luxury stores and people's houses you know and so 157 although that was fun and and satisfying and you could 158 build in a really good sort of communication around it 159 it didn't have the scale of impact that i'm looking for 160 erm with this we're looking to to change how the whole 161 industry operates we want to go first and of course be 162 able to build our business off the back of that but 163 ultimately i'm not interested in owning the idea of the 164 circular economy i want to give all these giant 165 companies that should have beaten us here first a kick 166 into going why the hell didn't you do this first you 167 know you had all of the resources you had all of the 168 setup you know what stopped you 169 Ι yeah 170 P16 and we're going to show them that it works and then 171 they will follow 172 yeah and so is it right there's two of you working 173 together on this 174 well so there was it started out er it started out as P16 175 two of us me and my business partner we're both product 176 designers erm and we set up a sustainable design 177 consultancy 178 I yeah

179 P16 which at the time we called the ((company name)) and is 180 now called ((company name)) 181 Ι 182 P16 in our in our mission to erm build circular 183 systems we came across a er a quy called ((name)) who i 184 mentioned who was who developed the first hundred per 185 cent recycled plastic cup and his company ((company 186 name)) and actually he has a number of other companies 187 he's beside that and we partnered with his organisation 188 ((company name)) and have now formed a joint venture 189 ((company name)) which is sort of amalgamation of our 190 team so it is now myself ((name)) ((name)) 191 ((name)) as our core team and then we have a network of 192 other er contractors and advisors etcetera that we work 193 with so we have somewhat grown since since then 194 yeah okay and i guess where did the original idea come 195 from was it the two of you originally kind of how 196 did that start the idea to do this product and this 197 service i mean 198 P16 we were we were looking at erm we got approached by a 199 client who was er well a prospective clients at the 200 time but he then became a client who was selling wine 201 in plastic bottles to the events industry and he was 202 selling them in plastic bottles of course because you 203 can't have glass on festival sites 204 Ι 205 P16 and instead of and his full plastic bottles allowed a 206 bar to serve an entire bottle of wine which is great 207 for the bars of course because that's a high value sale 208 in one go so it was a very good system and it had been 209 working happily for years then blue planet came along 210 I mhm 211 and all of the public suddenly became experts quote 212 unquote erm in plastic and how bad plastic is and all 213 of the festivals erm not having this sort of backbone 214 to to really sort of invest in going well this is the 215 best environmental option science says instead went to 216 a what's the most popular option and so of course 217 plastic was out and other materials are in regardless 218 of whether it made sense or not and so his entire 219 business was was under threat from this erm and so he 220 came to us and said hey what can we do and we were 221 looking at what do you want to redesign your packaging 222 or do we actually need to show people that this this 223 packaging is a is actually the best option now at the 224 time his his bottle was did have some improvements to 225 be made it it was multi layered material for a start

- 226 although it was PET which would in theory make it recyclable it actually had a erm nylon layer in it
- 228 I right
- 229 now quite understandably the nylon layer was that to 230 keep his wine fresh because if you just had a pet 231 bottle it doesn't form enough of an oxygen barrier 232 oxygen gets into the wine ruins the wine after bout 233 sort of eight months which meant that given that his 234 his er work was seasonal he would sell wine one year 235 and the way the festival business would work is they 236 would order you know a lorry full of wine and return 237 half of it so at the end of the season he would be left with quite a lot of stock that people have returned erm 238 239 and he would then save that for next season but if it 240 didn't last until next season it would all go off and 241 it would all go to waste which is of course very 242 environmentally friendly so at the time that was all he 243 could do now we worked with him and we developed a 244 solution that allowed him to and identified what he 245 needed to do to make a hundred percent recycled plastic 246 bottle with just PET
- **247** I mhm
- 248 P16 and erm we did the research to to find out prove that 249 that was possible told him about it and that's what 250 he's moved towards erm so that he could then continue 251 to sell his bottle interlinks we also alongside that 252 did a lot more of building his confidence but also 253 building communication material around why his wine 254 bottles made sense we did a carbon comparison that 255 showed okay well you guys think plastic bottles are bad 256 but what about alternatives well here's the glass wine 257 bottle of course it can be smashed and used as a weapon 258 it's also very heavy erm you know all of these things 259 it's also has a comparable recycling rates to PET 260 bottles if not lower erm you know
- **261** I yeah
- 262 all of these things but you know the festivals and 263 events weren't aware of that so er what we helped to 264 provide was that communication for him and that in 265 itself identified to us we thought well right there's 266 this this miscommunication going on in these festivals 267 they're grasping for an opportunity they know that 268 there's masses of waste being produced on site and it's 269 very visual at festivals right we produce the waste 270 everywhere but festivals is one of the few places in 271 your life as a consumer where the amount of waste that 272 you produce is is viscerally you're viscerally 273 confronted with it you know you go to Glastonbury and 274 the floor is a sea of rubbish which given the fact that

275 276 277 278 279		it originated as a sort of hippie eco festival type vibe it you know doesn't feel like that erm so of course the festivals were clambouring for a solution and not just for wine bottles and so we thought well how can we help this
280	I	mhm
281 282 283 284	P16	and we looked at the solutions that were already in the industry reusable cups being a a good example erm we thought well what's you know what's going on and what's going on there
285 286 287 288 289 290 291 292 293 294		well reusable cups unfortunately again were one of those examples of a good idea but currently they were little more than greenwashing erm there were a few places doing it well this is actually erm it's not from shambala shambala festival represented a sort of beacon of how it how reusables could and should be done but of course they achieved that by being a relatively small festival with a fan base of diehard ecos and really understanding that you had unbranded generic cups that you return and get maximum use out of
295	I	mhm
296 297 298 299	P15	unlike everyone else that jumped on the reusable bandwagon that printed the set lists of their festivals on there and dated them twenty nineteen world cup and everyone kept them as souvenirs and
300	I	yeah
301 302 303 304 305	P16	reusable cup companies would celebrate that seventy per cent of their cups get taken home as souvenirs and i went so seventy per cent of your cups are single use then brilliant ((laughter from interviewer)) that looks like a really heavy single use cup
306	I	yeah
307 308 309 310 311 312 313 314 315 316 317 318 319 320	P16	anyway we saw those issues going on and we saw that there was a problem with with greenwashing a problem with not understanding er recyclability and the problem that the circular economy option was not being presented people have lost faith in recycling partly because the big recycling companies have failed to provi to to really to move and provide traceable accountable recycling and instead just focus on high volume erm the high value materials and ignore the rest plastics erm and we thought all right well you know someone's got to show that there is an alternative and also that there are multiple that that there is no one size fits all erm and of course reusable cups actually fits within the cir the concept of the circular economy
321	I	mhm

322 P16 erm but the idea that this cup could replace everywhere 323 that these cups are used wasn't going to make sense and 324 you know you could see that the fact that these have 325 been around for fifteen years and they penetrated a 326 small portion of the the festival and events markets 327 and not into hospitals and dentist spaces because it 328 practically it doesn't you know doesn't actually make 329 sense anyway sorry that's a lot you might have some 330 questions in between haha 331 no it's interesting to hear so i guess i wanted to get 332 to the decisions that you made and he started to tell 333 me about some of the the kind of design related 334 decisions that you needed to make in this project could 335 you elaborate a bit on on what the kind of key 336 decisions were 337 okay another key decision branding right these cups 338 generally they're a PR tool to the big brewers they 339 provide these cups to festivals with their branding on 340 them and that's how they communicate to all the 341 festival goers whose drinks they're drinking and get 342 their name out there and 343 I mhm 344 P16 while of course we can now argue the how valuable as a 345 PR tool or disposable plastic cup is erm the key part 346 about being a PR tool is having your branding clearly 347 visible on the cup because for us if we want to take a 348 clear cup and make it back into a clear cup we don't 349 want it covered in ink 350 yeah 351 er that's that's not very good in fact covering it ink P16 352 ensures that it can't be recycled back into food grade 353 material you ensure that your PET becomes PET jazz 354 which is incredibly low value and therefore ultimately 355 absolutely destined for for landfill or incineration 356 and quite cynically lots of brands would get cups like 357 these they'd print their logo on them and they'd print 358 please recycle me and all sorts of crap about you know 359 put me in the recycling bin when of course in reality 360 you could put in recycle bin as much as you wanted but 361 it wasn't going anywhere erm that you'd like it to end 362 up erm and and again that was a big battle for us 363 because obviously we were a small you know we weren't 364 the world's biggest producer of cups we were a nobody 365 with a a big idea and we were trying to tell these 366 giant companies that they couldn't slap their branding 367 in full colour all over the cups erm that that was a 368 terrible idea and that it was stopping them from from 369 achieving any recyclability and of course they didn't 370 want to hear that or rather their sustainability teams

371 and this is the interesting thing about working with 372 these giant organisations is that they have a 373 sustainability department you go and talk to the 374 sustainability department they get it 375 Ι yeah 376 okay they understand but the problem is they don't make 377 any of the decisions unfortunately 378 no haha 379 they have little little to no effect on what happens it 380 seems other than really the kind of the PR angle and 381 you know just a bit of the press things they might 382 direct to the please recycle me stuck on the bottle 383 because that would be better communication but that 384 seems to be as much sway they have the branding and 385 team seems to have much more sway because they can just 386 go absolutely no however far you've got through their 387 branding goes nope that doesn't represent us we won't 388 er things because that is so important to these big 389 companies is their brand image so what we then had to 390 start doing was trying to push them into embossing 391 their logos onto the cups 392 Ι ok 393 P16 now this is quite difficult because one an embossed 394 logo is not as visible 395 Ι yeah 396 P16 as any printed logo because of course you haven't 397 changed the colour of the company you've just pressed a 398 logo into the outside but we felt they looked rather 399 classy but the other difficulty with that is that 400 embossing requires making a mould tool to a new mould 401 tool with that brand's logo etched in a mould tool 402 costs twenty thousand euros to produce with that 403 Ι right 404 P16 erm and and that's for one cup type 405 I mhm 406 so if they want half pint pint cups and cocktail cups 407 that's sixty thousand pounds on just mould tools okay 408 now of course for a giant consumer of cups long term 409 they could buy into that you know it would actually end 410 up producing a saving versus ink printing because once 411 we put it into the mould then that's a one off cost and 412 then we could keep making cups ad infinitum but of 413 course they update their branding 414 Ι yeah

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415
     P16
            they change the designs and logos etc and messaging so
416
            often that that doesn't work out that way and the other
417
            thing is that meant that small small events that
418
            previously could get a generic cup just have a a one
419
            off print on them on a few thousands they of course
420
            couldn't afford embossing so for anyone small we had to
421
            go well you know you've got to go unbranded cups and
422
            you know that's a big decision for events and clients
423
            to go right we're going to sacrifice our ability to
424
            communicate our our brand in order to have these
425
            recyclable cups and also difficult for us because of
426
            course it would be much better to be able to
427
            communicate what we were doing on the on the object of
428
            which we were doing it with and so obviously our
429
            ultimate holy grail was to develop a a solution that
430
            allowed us to put ink on the cups and then remove it
431
            something we have recently cracked
432
     I
           ok
433
     P16
            so we found some companies that we are now looking to
434
           build a factory with that will allow us to remove ink
435
            from cups erm which will allow us to address this this
436
            this colossal problem add on but that was a that's been
437
            a sort of big big moment for us
438
            and are you able to do that with kind of more
439
            sustainable inks and and whatever product is used to
440
           remove it or
441
           yeah so the erm the company that one of the companies
442
           that we have got to develop it has managed to make the
443
            entire process using erm basically bi biological sort
444
            of erm removal agents that are all very sort of safe
445
            and non toxic and the inks there are various different
446
           types of things that you can use but it works with a it
447
           works with most standard standard erm types and
448
           printing processes erm so yeah we're it's it is it is
449
           very it is very flexible from our point of view and of
450
            course you know as we say at the moment any cup that is
451
           being printed currently that whole cup is going to
452
            waste now at the moment we've got a situation where
453
            okay we're we're having to remove the ink and that is
454
           being you know a very small amount of you know chemical
455
            contamination that will be removed from some water and
456
            whatnot but that we've now made the whole cup
457
            recyclable so there's a big big step
458
            great and how do you make decisions when you're working
459
            with your partners how do you go about deciding how far
460
            to take it and which options to go with
461
     P16
           well okay well i mean in terms of we we we sit down
462
            have a sort of board meeting and discuss and then
463
            usually the sort of you know decision comes down to
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- 464 somewhat of a somewhat of a vote although we're all now 465 very very much on on the same page which is that 466 ultimately we we are very confident that the world is 467 going to realise that this is a problem that needs 468 solving 469 Ι yeah 470 P16 and that therefore that although people might say no to 471 us no you're too expensive now no it's too complicated 472 no it's too difficult that is a time related concern 473 they they are saying no to us now but they won't say no 474 to us in a year or in five years in a sense we are we 475 are very confident that the planet needs saving haha 476 and that these issues need tackling and that therefore 477 we make the decision as to what we feel will put us in 478 the best position possible to make the biggest and best 479 environmental impact we don't make our decisions based 480 on what will give us the best business because as i say 481 at the beginning with these ink printed cups people 482 would say can we can we just by your hundred per cent 483 recycled plastic cups print our logo on them and throw 484 them away ourselves we could we could have done that 485 that would have made us lots of business it would have 486 allowed us to grow one argument would be it would have 487 allowed us to grow our business to a size that we would 488 then be able to put added pressure to stop businesses 489 doing that 490 yeah yeah 491 P16 but we don't want to compromise on our values because 492 we feel it's important to show that there is that there 493 is a better way and we are confident that they if they 494 don't come around on side now that they will eventually 495 you know it's legislation consumer pressure is all 496 mounting you know it's greta thunburg and the school 497 strikes and extinction rebellion today and tomorrow 498 there is only going to be more pressure 499 Ι yeah 500 P16 legislative or public you know and
- 501 I hopefully yeah
- 502 P16 and the problems and the problems aren't going away 503 science shows us that the problems are there and that 504 they're getting worse and you know predict and the 505 trend of consumers and and the world waking up to the 506 scale of these problems is that it seems very unlikely 507 that while you know things continue to get badly that 508 the consumer trend will suddenly get to a point where 509 we decide to start ignoring it again um i'd say it 510 would be it would be very hard for that to maintain a

511 512		situation because of course the damage is becoming ever more visible
513 514 515 516 517	I	yeah no definitely i suppose there's a sort of slight distraction for some people this year with the pandemic but yeah it might have slowed a few things down but hopefully it'll it'll pick up again in terms of sustainability pressure yeah
518 519 520 521	P16	yeah i do i do think that although again you know we we sort of you know we feel that the pandemic does draw into focus the sort of the fragility of our world and our systems
522	I	mhm
523 524 525 526	P16	and you know and also the sort of the fact that that big moves can be made you can make huge decisions to to sort of you know to change how you do things and how you operate in the face of an enormous challenge
527	I	yeah definitely
528 529	P16	and those that rise to that will will do much better than those that don't
530 531 532 533	I	yeah and so with the types of decisions you've been talking about for this project were there any decisions that were difficult that you didn't all agree on straightaway
534 535 536 537 538 539	P16	yes what i mean as i mentioned at the beginning is that we when we first set up this erm the rubbish project we actually had a number of other partners including a a waste manager in the UK and another businessman and erm they were much more interested in building a viable business
540	I	right haha
541	P16	first
542	I	yeah
543 544 545 546 547 548 549 550 551 552 553 554 555 556	P16	and then environmentalism second which is of course understandable one might say incredibly sensible erm but we were conscious that you know everyone is compromising on their values to get ahead and of course once you compromise on your values to get ahead you're then going to be worried about losing the business that you have if you make a change so we thought well we want to build something that we're happy with from the start that we can really believe in and whatnot and and not and not compromise and although that's going to be you know really difficult and we i mean we we did come to disagreement on that so much so that we were unable to move forward with those partners and we had to erm buy them out of the business erm

557	I	уер
558 559 560 561	P16	but but you know it it was an important part of certainly our from our perspective erm yeah a key you know key element of of what we're doing we're here to make a difference
562 563	I	and so with those of you who are now continuing to work together how does i guess responsibility work
564 565 566		who what are the lines of responsibility who takes the final responsibility for the decisions that you've made for the product
567 568 569 570	I	well i mean in a sense i have been appointed CEO of the new of the new company i guess i guess that would be that would be me i don't you know i don't like to think of it like that
571	I	yeah yeah
572 573 574	P16	i mean we more have you know we do we do generally work very hard to obviously of course we are at the stage we have we have quite a small team so
575	I	yes
576 577 578	P16	it's relatively easy to come to a sort of a point of for now and and because we have a small team and our visions are very aligned
579	I	yes yes
580 581 582 583 584	P16	that that we have you know that it has to be relatively easy to to come to sort of you know close decisions and of course we do have a sort of five man board so that works quite well from from a tiebreaker point of view as well
585 586 587 588 589	I	ok yeah and then i guess talking more broadly because you you've had been been a designer and had the role of product designer do you feel that erm as a designer you have a responsibility to towards sustainability in your work
590 591 592 593	P16	absolutely my industry is a huge part of what's wrong with the world erm it that was actually the core reason why myself and my business partner ((name)) set up our first business
594	I	yeah
595 596 597	P16	erm is that it became incredibly obvious during my time at university that people like myself had designed crappy systems
598	I	yeah

599 600 601	P16	that produced waste it you know our whole my whole course was designed around we create products and solutions that people didn't really need
602	I	yeah
603 604 605 606	P16	you're actually there really to design a need because that's what companies want right most companies that hire product designers okay they want me to come along and design a product that will make more people buy
607	I	yes
608 609 610 611 612 613 614	P16	regardless of whether they need it or not you know if you're if you're a toothbrush company you know despite the fact that you've already made very good electric toothbrushes yeah on yeah you're gonna bring out more electric toothbrushes you're going to design new heads really regardless of whether they're any better at brushing your teeth or not
615	I	mhm
616 617	P16	you're interested in producing more and more products because that's how you make money
618	I	mhm
619 620 621 622 623 624 625 626	P16	and of course invariably these companies that were hiring you to produce things because we have a distinct gap between producers and recyclers or or disposes they don't they don't want to or care you know get they don't care what the designer thinks about what happens to the product at the end because that doesn't affect them they're only interested in it flying off the shelves not where it ends up
627	I	yeah
628 629 630 631 632	P16	now of course that is somewhat shifting more and more brands are thinking well it looks bad if all my products go to waste but really still the goal is you know designers create more and more sort of appealing products that get you to
633	I	yeah
634 635 636 637 638 639 640	P16	(buy) something you don't need and of course these designers were failing to consider er how and what happens to their products and often failing to consider that sometimes you can design a solution to a problem without creating a product is that in fact you can design a better system that requires less products to do something that you need
641 642	I	yeah yeah and in your design career so far have you you've worked more with clients rather than working in

643 644		a role that's in house in a in a large company is that right
645 646 647	P16	yes so i i mean i've had i worked for erm a year for a company that er produced furniture out of recycled aircraft bits erm they were a small startup again
648	I	yeah
649 650	P16	and then other than that i have spent my entire time being working for myself
651	I	yeah yeah
652 653	P16	so i don't have an experience in one of these in one of these
654	I	yeah sure
655 656 657	P16	large er design consultancies and obviously a lot of my friends from university that is where they ended up so i i am aware of what it's like to be there
658 659 660 661 662 663 664 665	I	yeah and so i guess when you've worked with clients you mentioned a little bit at the beginning about trying to challenge the client and see whether that is what they really want what they say they're wanting or whether there's a more sustainable option do you feel a responsibility when you work with a client or have a client brief to to try and influence it towards sustainability
666 667 668 669	P16	oh absolutely i mean unequivocally our design consultancy was set up on that basis we won't work with you if your interest isn't in improving if your interest isn't in improving
670	I	yeah
671	P16	the sustainability of your product
672	I	right
673 674 675 676 677	P16	we weren't interested in making a product prettier or sell more unless the core focus was improving its sustainability characteristics so that it had a better environmental impact and then we were happy for it to be to be marketed
678	I	yeah
679	P16	and for it to be sold so
680	I	yeah
681	P16	that was a non negotiable elements
682	I	uhu

683 684 685 686 687 688 689	P16	you know we weren't designing for for any other reason that that was the core purpose basically and generally it was designing for the circular economy so thinking about the materials that they use to make their product and the full lifecycle of that product throughout its use but also whether a system could be in place erm maybe even to replace the use of the product altogether
690 691 692	I	so you haven't had you haven't found yourself in a situation where you've had to try and convince a client to do something more sustainable
693 694		because you've picked from the outset to work with people that already
695 696 697	P16	oh no i i we have abso we have absolutely because although they approached us as to saying you know we're interested in in some eco thing
698	I	yeah
699 700	P16	obviously they're interested in the eco thing generally is from a PR angle and what they want
701	I	right
702 703 704 705	P16	to do is the least amount of change yeah the most amount of positive PR value whereas while we're interested in is the most amount of environmental impacts regardless
706	I	yeah
707	P16	erm and that's a really difficult one because
708	I	mhm
709 710 711 712 713 714 715 716 717	P16	one of the really interesting things right is that companies are so focused on the things that the public notice that they sort of you know they they treat those like they're the biggest environmental problems so you'll have a company that's got that's consuming masses of energy and wasting masses of material and then they're coming to us and they're asking us whether they should be using plastic bags in their in their kitchens i'm like
718	I	yeah
719 720 721 722	P16	forget that's not your environment it's that you know that represents such a tiny tiny element of your environmental impact you are only focusing on this from the point of view of a PR element
723	I	yeah
724 725	P16	and not and therefore really missing the point about why you should be making environmental change

726	I	yeah
727 728 729 730 731 732 733 734 735 736	P16	and in reality also it's a short sighted move right because while the public for now might be sated by your your thing because that's where their knowledge is their knowledge evolves as people become more aware of the topic and as someone like me shouts oi that's that's not on you're green washing and then of course the decision that you made looks bad and cynically paints you in the light of someone that was simply trying to pla put a plaster over when er you know really needed to rebuild the whole dam
737 738 739 740	I	yeah so you're kind of using the PR argument kind of within that to convince them that they need to do the more sustainable thing because it's going to come out in the end
741 742 743 744 745 746 747	P16	oh absolutely you know we we do it we do understand that of course the value to these companies you know as i as i say you know they're there to make profit that's that's not a bad thing you know we can't that's what that's the whole role of business and in order to get profit they need to they need to be viewed er nice i think we do understand that but we think that it is we think it is a short sighted PR move
749	I	yeah
750 751	P16	to do something that ultimately has no environmental er benefit but now is the flavour of the month
752	I	yeah
753 754 755 756 757 758 759 760 761 762 763 764 765 766	P16	sort of for the public because of course the public's knowledge will change and evolve but you've implemented a system that might be hard to change the example i would use is supermarkets switching to paper bags there is mountains of scientific evidence that paper bags are not as good as plastic bags just ((inaudible)) takes you know they are take four times as much energy to produce they are six times as heavy and ten times as bulky so ten lorries of paper bags or one lorry of plastic bags the carbon comparison is insane so it it obviously doesn't make sense to use paper bags any big supermarket chain or company should know if you know a little bit of research found out because consumers don't know that at the moment
767	I	yeah yeah
768 769 770 771 772	P16	so all of these you've got morrisons boots everyone going we've switched to paper bags me going haha well i mean you've pleased some customers now but how short sighted can you be to to to tackle the plastic waste problem while massively increasing your carbon

773 footprint and not thinking that at some point this is 774 going to bite you in the bum 775 776 P16 you know i don't know i think it's short sighted erm 777 and it's certainly not the sort of advice i would give 778 to my clients you know the co they come to us to to 779 tell them how to get our advice on how they can design 780 their product or or company to be more environmentally-781 friendly i'm not gonna suggest them a solution that's 782 Ι yeah 783 P16 or endorse or encourage or support a solution that 784 frankly doesn't do that and 785 Ι yeah yeah 786 is only designed to appear so 787 and how do these conversations usually go with with 788 clients or potential clients when you're trying to push 789 them to take it that bit further 790 it goes it varies one of the biggest difficulties is P16 791 that innovation in these sort of areas especially when 792 you look at packaging and and the production of 793 products is that the we've got to a situation where 794 most things are economically produced on vast scale 795 mass production that that's how most things that people 796 consume use packaging products are produced on an 797 unfathomable scale and the problem with that is is that 798 it means that to innovate you have to be one of these 799 giant companies that are producing products on a fath 800 you know unfathomable scale other wise it's very hard 801 to develop and implement a new technology so so for 802 example we got approached by a a company that make erm 803 muesli ok and they make organic you know local muesli 804 and they wanted to know what to do with their packaging 805 because at the moment their packaging has a bit of 806 plastic on it of course so to keep it fresh and so you 807 know erm ((inaudible)) and it had you know like a sort 808 of plastic sort of sealed bag and it was actually 809 compared to other product alternatives you know very 810 lightweight low energy to produce and being a kind of 811 ldp thing inferior recyclable obviously ((inaudible)) 812 often doesn't get recycled but that's a problem with 813 the recycling system and it's the same with card or any 814 other packaging type to be honest erm but their 815 customers obviously they felt their customers didn't 816 want plastics and they were looking for an alternative 817 erm and of course they're in a tricky situation where 818 they can really only choose from the packaging the 819 standard premade packaging types that are available 820 because you know they don't have the facilities to

821 produce their own packaging they're just using off the 822 shelf packaging and and branding it with their own 823 thing so the only options they have available to them 824 and this is the same for most small businesses are the 825 generic stock options so unless a big company decides 826 to go hey we're gonna produce a load of really good 827 recycled or environmentally friendly stock option 828 products that people can put their things in these 829 small companies it it you know are often will find that 830 hard to innovate or at least in certain spaces 831 especially packaging 832 Ι mhm 833 P16 erm yeah and that that is the that is a big that is a 834 big difficulty erm you know because it is very 835 efficient to produce things that at a high volume er in 836 things from an energy efficiency point of view you know 837 big injection moulding machines and whatnot that are 838 producing a product every half a second are actually 839 very energy efficient compared to you know smaller 840 batch production methods so it so it's not that mass 841 production itself is bad the problem is is that the 842 people who control mass production are these giant 843 companies that are slow to move you know as as is 844 evident in any industry large corporations are like 845 tankers they are you know slow to turn around and for 846 some reason despite all of their reems of cash 847 difficult to you know they find it difficult to 848 innovate as pointed out with my business part now 849 business partner((name)) beating every other disposable 850 cup manufacturer in the world to making a hundred per 851 cent recycled plastic cup and that is madness it should 852 not have taken some passionate individual activist to 853 create this product when everyone else had the tools 854 sitting around available to them but that is probably 855 the the fundamental biggest problem is that we've got a 856 really big problem that requires big people to go first 857 and the people leading the way are little people and so 858 the only way the only way of er making things work is 859 when the little people get to drag the big people along 860 with 861 Ι yeah 862 by their ears and that is quite a quite a difficult 863 scenario to engineer 864 yeah definitely well that's' it's really interesting to 865 hear the details of this this project and this cup 866 those are all the questions i had was there anything 867 else that you thought i might have asked about but 868 didn't or anything you'd like to add

- 869 P16 hmm erm well i mean the other decisions i guess that we made was around what market markets to target
- **871** I yep
- 872 P16 er so i'll give you that i mean we basically we we 873 chose the events industry kind of as i pointed out one 874 because of the serendipity of having a client arrive in 875 sort of that space but also because it was clear that 876 as i mentioned because waste was very visceral at 877 events there was much greater demand for a solution to 878 this to these problems in that setting than there were 879 in other settings that use the same product so 880 festivals as a type of event were where it was most you 881 know visual and therefore there was the most demand but 882 there are actually a reem of other events from football 883 stadiums to business conferences and also obviously 884 other areas where those cups and products are consumed 885 think erm airlines trains
- **886** I yeah
- 887 hospitals you know in house cafeterias in businesses P16 888 you know they're produced everyw they're consumer 889 everywhere erm but of course we made the decision to 890 start with the events industry erm although covid has 891 somewhat changed the situation on that and we're now 892 looking at the other at the other markets because of 893 course events poof erm haha but er with the events 894 industry because they they put the issue front and 895 centre and also because festivals are actually almost 896 the perfect testing ground or microcosm for for these 897 sort of things because they are a temporary ecosystem
- **898** I mm
- 899 P16 they everything happens within this one controlled
  900 space but also that you design beforehand each year so
  901 you could make incremental changes and test a circular
  902 economy system in this in this wonderful sort of like
  903 you know trial safe trial space you know it's like a
  904 system you could establish over an entire country you
  905 get to test in this in this microcosm environment
- **906** I yeah
- 907 P16 and so that you know they represent quite an
  908 interesting opportunity erm to to sort of explore that
- 913 P16 pfff i think that the most important decision for us in 914 terms of the sustainability of it was committing to the 915 idea that it is not just about making sure that people

916 917 918 919 920		bought a hundred percent recycled plastic cups because you know that is moving from where most people were which is er cups that were you know no recycled content or a small amount to getting them to a hundred percent recycled plastic cups some would consider a win
921	I	yeah
922 923 924 925 926 927 928 929 930 931 932 933	P16	you know we we've gone from a situation where they're consuming more and more virgin materials to a situation where no virgin material is being produced no new plastic is entering the world and the thing that is going to waste is plastic that was already going to waste erm however with you know i think that our most important decision was realising that you know we weren't happy with just that we felt that that was just half of the game and that we were committed to doing this much more complicated system of trying to get the cups back and it's very easy the concept of trying to sell a product
934	I	yeah
935 936 937 938 939	P16	you produce them all in one place and you send them out in in bulk to places that distribute them erm but once they've been taken to a venue and loads of people have used them and they've gone all over the place trying to get those produces back is is a really big challenge
940	I	yeah
941 942 943 944	P16	but making the decision that that was you know fundamental to to what we were doing and what we were trying to achieve and the story we were trying to tell and the example we were trying to set erm
942 943	P16	fundamental to to what we were doing and what we were trying to achieve and the story we were trying to tell
942 943 944		fundamental to to what we were doing and what we were trying to achieve and the story we were trying to tell and the example we were trying to set erm
942 943 944 945 946 947 948 949	I	fundamental to to what we were doing and what we were trying to achieve and the story we were trying to tell and the example we were trying to set erm  yeah  but that was you know that really that's really guided how how we've operated and the partnerships that we've tried to create and in in fact it's moved us into this situation where we are now much more of a waste
942 943 944 945 946 947 948 949 950	I P16	fundamental to to what we were doing and what we were trying to achieve and the story we were trying to tell and the example we were trying to set erm yeah  but that was you know that really that's really guided how how we've operated and the partnerships that we've tried to create and in in in fact it's moved us into this situation where we are now much more of a waste manager than a product supplier
942 943 944 945 946 947 948 949 950 951 952 953 954 955	I P16	fundamental to to what we were doing and what we were trying to achieve and the story we were trying to tell and the example we were trying to set erm  yeah  but that was you know that really that's really guided how how we've operated and the partnerships that we've tried to create and in in in fact it's moved us into this situation where we are now much more of a waste manager than a product supplier  yeah  cos as i say recently we partnered with one of the world's biggest producers of packaging so we're no longer concerned with the making of the products other than that we are planning pushing on influencing them

962 963		is where we see is is the sort of the big issue or or challenge
964 965 966 967	I	yeah so yeah so rather than just designing a product that's more sustainable in a certain way it's then about trying to take responsibility for the whole system and the whole kind of lifespan of the product
968	P16	yeah
969 970 971	I	which which goes much beyond i guess what you must have been learning about when you studied design and the role of design
972	P16	yeah
973	I	it's completely taken off in yeah going beyond that
974 975	P16	well i i think of it as i think of it very much as design erm
976	I	mhm
977 978	P16	but just sort of you know design with a different purpose
979	I	yeah yep
980 981 982	P16	and also so the other things is that i'm i am in a way designing a product i feel that the product is is a system and
983	I	yeah
984	P16	it's a bit like having a rental product
985	I	yeah
986 987 988 989 990	P16	if you will or the product as a service generally the reason you have products is not because you want the object it's because you are trying to achieve a function you don't want this cup because this is a cup you want it because it allows you to take a drink
991	I	yeah
992 993 994 995 996	P16	and so really the best type of design is thinking how do i give someone the thing that they want not the the product that they're imagining that delivers it because you know that's not what we're looking for we want something that serves us a drink
997	I	yep
998 999 1000 1001 1002 1003	P16	and thinking around that and thinking about that as the challenge allows you to be quite creative in your how else could they have a drink and and someone for example interestingly i'm not saying this is the best er approach to the situation but an interesting example of this is that they did one of the london marathons

1004 1005		they had edible edible water so it's wrapped water in this like edible bioplastic
1006	I	yep
1007 1008 1009 1010	P16	so you could just eat this ball of water and you know that's a rather interesting thing of what do people want they want a method of of drinking not necessarily the product
1011	I	yeah
1012	P16	that you associate it with
1013 1014 1015 1016 1017 1018 1019 1020 1021 1022	I	definitely yeah i mean i've spoken to plenty of designers who kind of aspire to this next level of service or kind of taking control of the product lifecycle and being more responsible for that but not not many who've achieved it you know they have that aspiration for either themselves if they're working at a small scale or for the companies they work for to to move in that direction but it's great that you've actually you've actually decided right so this is this is what we're doing we're gonna achieve this
1023		yeah so that that's really great
1024 1025 1026 1027 1028	P16	we sort of set it out as our sort of our you know our hill to die on if you will with with the confidence that you know this is one of the things i i bring this back to i am you know ninety nine a hundred percent confident that someone will do this er eventually
1029	I	mm
1030	P16	and so with that logic why not us now
1031	I	yeah yeah
1032 1033 1034 1035 1036	P16	it's you know why not us now the if we know that this is where we want to be and you know you you go to sustainability you know an ellen macarthur foundation talk or what these things people hold this up as the future where we want to go
1037	I	yeah yeah
1038 1039	P16	in future well we have the technology to deliver the future right now
1040	I	yeah
1041 1042	P16	the only thing getting in our way is willpower and you know i'm young i've got a lot of willpower so
1043	I	yeah
1044	P16	i figured let's go for that

1045 1046	I	great well thank you so much erm i don't wanna keep you any long i'm sure you've got plenty to do
1047 1048 1049	P16	well actually i do i do have to shoot off in a but but i have one final thing as a decision that's things the other big decision that we've made is around plastics
1050	I	mm
1051 1052	P16	obviously as i as i said you know erm a couple of years ago blue david attenborough came out with blue planet
1053	I	yeah
1054 1055	P16	and the whole world suddenly woke up to this issue that's been an issue for ages
1056	I	i know yeah
1057 1058 1059 1060 1061 1062	P16	and they latched onto thanks to some some organisations and whatnot including rather disappointingly greenpeace erm who who created rather simplistic messaging now of course simplistic messaging is the easiest type of messaging to convey but the messaging stated very simply that plastic is bad in all forms
1063	I	mhm
1064 1065 1066 1067 1068 1069 1070 1071 1072	P16	and the problem with that is science isn't simple science is complicated and sustainability is a science and the that message has actually in my mind been quite damaging because you've got people thinking about plastic as a material as the enemy but plastic is actually one of the most incredible materials that we have to design with to create things with at our disposal and what is wrong with plastic is how we are using it
1073	I	mhm
1074 1075 1076 1077 1078 1079	P16	of course i no not disagree that plastic in the oceans is a is a terrible thing and something that we should not have but that is a waste management issue we wouldn't want our oceans to be filled and floating with all our food waste all of our glass waste all of our aluminium
1080	I	haha
1081 1082	P16	it doesn't matter what the material is it shouldn't be there
1083	I	yeah
1084 1085 1086 1087 1088	P16	erm and so we had to make a decision that instead of going along with the wave which is every environmental organisation putting anti plastics as their sort of key thing and all of these big businesses going we're gonna be tough on plastic and go well no we're interested in

1089 1090 1091 1092 1093 1094 1095 1096 1097 1098		environmental difference and if that you know making environmental the biggest the right environmental impact and if that means working with plastic if means proudly working with plastic and explaining exactly what we're doing and why and you know not being afraid to in a sense be the be the sort of people that you know i mean people attack us they'll come to use and go you know what are you you're calling yourself environmentalists what are you doing making plastic products and
1099	I	right
1100 1101 1102 1103 1104 1105 1106	P16	we have the confidence that we have the science to backup why we're doing what we're doing so i i don't feel bothered by that but in in a sense i see it as a fun challenge that you know if you really care about this issue you should actually eventually come round to my viewpoint because i'm trying to solve the same issue that you are
1107	I	mhm
1108 1109	P16	and i have the science to show that this is the way of solving it erm
1110	I	yeah
1111 1112 1113 1114 1115 1116 1117 1118 1119 1120 1121 1122 1123 1124 1125	P16	and yeah erm you know i'm not afraid not afraid to tell you that and to tell you that you know you're wrong in thinking that plastic is bad because at the end of the day my one of my worries with this whole anti plastics movement is that you've got a huge amount of people expending energy in trying to do a good environmental thing that is being totally misdirected campaigning against in some areas something that totally isn't a problem or trying to inst install solutions that are in face negative as i pointed out with the the paper bags or paper straws you know the other lunacies bamboo toothbrushes erm you know there there's a danger in for me there's a huge part of the world that don't care about the environment and aren't making any you know any effort to change it
1126	I	yeah
1127 1128 1129 1130 1131 1132 1133 1134 1135 1136	P16	which you know if we've got twenty thirty per cent of people you know who are caring about the environment be def i definitely don't want them to be try proposing and bidding for solutions that don't make sense you know that's terrible we're we're screwed if that happens erm you know we need the people that are fighting for the environment to be fighting for solutions that make sense and therefore we have to we have committed to telling an uncomfortable truth and not being afraid to you know have people misunderstand

1137 1138		what we're doing and you know throw hate our way until they get round to understanding why
1139 1140 1141	I	yeah interesting wow it sounds amazing that you're you're doing all this with so much energy and yeah making it work despite a pandemic and everything haha
1142 1143 1144 1145 1146 1147 1148 1149 1150 1151 1152 1153 1154 1155	P16	yeah well i the pandemic is obviously has obviously been bad in one sense it's shut down the whole events industry which i mean for us actually it locks out we had some really big deals with some rather large breweries that it completely destroyed which was very tragic erm but of course you know we're adaptive and innovative we found you know found a way to stay alive and to be honest it's given us the time to focus on improving our product offering and mission and focusing on who we want to target and who we want to partner with and while nothing nothing is is or not much not much is is going on in that sense going we've built we've built this partnership that i've i've mentioned with this this big packaging producer
1156	I	mhm
1157 1158 1159 1160 1161	P16	and used the time to really focus on well you know it doesn't matter that the world's not operating now it will return to normality at some point and we need to be ready to go with the best environmental solution when that when that happens
1162	I	уер
1163 1164 1165	P16	you know this isn't the time to sit back and sort of panic while the coronavirus is going on you know if you've got things to do it's time to crack on
1166	I	yeah haha
1167 1168 1169 1170 1171 1172 1173 1174	P16	so er disasters are opportunities you know as the end of the day the last financial crash out of that came airbnb and all sorts of other you know businesses that lots of people in our industry will have been it will have affected our competitors in etcetera so that will if we are clever that presents a big opportunity erm yeah and haha there's always a silver lining if you're determined to go get it
1175 1176 1177 1178 1179	I	yeah well best of luck with it all and thank you so much for for taking the time to talk to me today it's definitely very interesting to hear this quite different approach to to other people i've spoken to so yeah thank you
1180	/end/	