I = interviewer; P1 = participant. Refer to DDM2020 dataset documentation for more information.

1 2 3	I	erm so first I just have a few very quick background questions to get started and to get the context of the conversation
4 5 6		so you told me about erm a recent sustainable design project that you were wishing to talk about could you remind me what the project is
7 8 9 10 11 12 13 14 15 16 17	P1	it's erm a trestle erm so it's a trestle leg table erm that I designed for the university that I'm working at and erm the background is that the faculty of design erm just got a new building and there are about five hundred six hundred students studying design at ((university name)) and the task was that for the new building there should be a very flexible erm solution to furniture solution erm to rearrange the seminar rooms erm very easily and erm yeah me and another designer we were er invited to participate in this brief
18	I	mhm
19 20	P1	and erm yeah we came up with a solution for a trestle trestle leg basically
21 22	I	okay and so the brief came so the university was the client and they provided the brief to you
23	P1	yes exactly
24	I	yeah okay
25 26 27 28 29 30 31	P1	and the brief was quite clear so that it erm there should be I think it was like two hundred and fifty tables at the end of the day so about five hundred trestles should be produced and there was a fixed budget and erm er certain er constraints like stackability or erm yeah certain sturdiness of course erm yeah yeah
32	I	and was sustainability in the brief in any way
33	P1	not exactly no
34	I	okay
35 36 37	P1	actually something that we erm developed out of the let's say the project helped to develop a certain idea about sustainability
38	I	mhm okay
39 40	P1	and we as designers push this this idea forward I would say $% \left( 1\right) =\left( 1\right) +\left( 1\right)$

41 42 43	I	right and what was your particular role you said there were two of you doing the design together is that right
44 45 46 47	P1	yes yes so erm I'm er oftentimes working with another colleague of mine another designer and erm it's just the two of us designing things together
48 49	I	together okay so you have a similar skill set and training you're not working
50 51 52 53	P1	yeah we have the same skillset and training yeah it's basically it's it's like erm he's the sparring partner you know like you know we we bounce ideas back and forth and erm
54	I	okay
55 56	P1	but we both trained as designers more or less the same education yeah
57 58 59 60 61 62	I	yep okay and then this might be a little bit more tricky but could you briefly tell me about some of the decisions that you made so we we can go into more detail afterwards but but what were the particular decisions that you had to make in designing this product
63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80	P1	erm well decisions yeah I think design is always decision-making erm the whole time erm I mean at the at the end of the day you have a you have a certain erm there was maybe like a vague idea by the university what they wanted and then it's our role as designers to give this idea erm a form basically to to to bring it into being and erm so decision making I would say is erm well I mean there are there are lots of lots of tiny tiny decisions erm I mean at the very beginning you you develop maybe a a rather abstract idea of of how something could be and then through a iterative process of model making and sketching you erm you yeah you develop this idea but it's
81 82 83 84 85 86		oftentimes not so much that you erm only decide how things should be but that you erm do something and then the the thing that is in front of you may be a drawing or a model erm that speaks back to you and erm in a way so it's erm and then then of course you react to it and erm and so there are hundreds of of decisions detailed decisions for example erm I mean if I go a bit more into detail what the product is and it's basically erm shall I show it to you

88 89	P1	okay I hope I can get it on the screen and it's tricky so basically
90	I	okay yeah I can see it
91 92 93	P1	yeah and you have if you have two of them like you know standing like this and on the other side like this
94	I	уер
95 96 97 98 99 100 101 102 103 104 105 106 107 108	P1	then you can place a er tabletop on top of it now it's it looks like er super simple shape that you might think okay this already exists it's already out there and it probably even is erm but really it's based on erm on quite it's on the very analytic and er er process I would say erm so yeah I'm with with erm so one one part of the brief was that erm they wanted a trestle leg solution but er they wanted to be able erm when you have a seminar erm to sit at a corner because they want and they want to sit all around the table and this is of course quite problematic if you have erm let's say erm you know a normal normal trestle which is more or less
109 110		<pre>can you see ((lifting up and showing the product))</pre>
111	I	yeah I can see that
112	P1	which is 'A' shape you know
113	I	yeah
114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129	P1	then it's impossible really to sit at the er the short ends of the of the table and it's erm you can't really sit around and it's more or less just erm a table for one person and so we had to come up with a solution where you'd where it's possible to sit all around so basically it should be more like a table but then the tabletop should easily come off erm and so this is this is this was sort of the first idea that we have that we that we use the the the normal legs and then we think about okay if we just get so so the this this shape erm basically arrived from from this requirement and then erm it went on that er they wanted er it turned out that this shape is quite erm nice because if you turn it to one side or the other you actually get different heights
130	I	mhm
131 132 133	P1	er and so as it's an art school erm oftentimes we have exhibitions and er we need small pedestals or erm yeah just erm small furniture that that

134 135 136 137 138 139 140 141 142		enabled the students and teachers to show their work and so this also erm is not only a system for the seminar rooms where you can where you can have just normal tables but you can also rearrange the whole seminar room to have a erm exhibition where you have small pedestals erm and so on and erm and then the size of the tube is also not just any size of the tube but it's actually erm a standard erm
143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164		well normally you for example you have tubes that are erm inch measured in inch so you would have a er two and a half inch tube but erm we went for a metric er tube which is a little bit it's still a standard but it's not the the the normal I would say but we went for this because erm the plastic tubes that are used in erm erm electro installations for example that you have in normally not in your in the in the basement for example you would have erm plastic grey tubes and there are a lot of clips and and erm little fixtures that you can buy easily off the shelf from the diy store and so on so erm we we use the same d diameter because then people are able to use this product as erm and that is also conceptually what we want when I said we developed a certain idea of sustainability throughout the project that we thought of the project the product er as we wanted it to be a semi-finished product we didn't want it to be er something that is all that is sort of dictating a certain way of use
165	I	okay
166 167 168 169 170 171	P1	but we wanted it to be open to be appropriated to be erm adapted and so on so erm every decision was made around this this idea erm that we didn't want our vision of the product erm and how it's used to be too dom er too dominant in the in the in the use that we get yeah
172 173	I	and did you did you explicitly in your minds relate that that principle to sustainability
174 175 176 177 178 179 180 181 182 183	P1	yes and the the link may be erm so with design and sustainability it's erm it's er it's an I think a very complicated thing because erm I think what what design does is basically it offers alternatives and it offers erm very it creates variations erm I don't think that we as humans or as designers of particular I think we're not really good at predicting the future and erm but when it comes to sustainability there is this this erm idea that you you know that we

184 185 186 187		that our generation should behave in a way that we don't erm erm yeah sort of interfere the the the with the needs and the freedom of future generations
188	I	mhm
189 190	P1	then but I'm I'm the question is how can design keep up to this promise
191	I	mhm
192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219	P1	and I think that is erm oftentimes in design and when comes when it comes to sustainable design erm people immediately think about the materiality of the thing and is it recyclable and is it erm it does it come from from er er let's say good sources erm and so on and so forth and but this is only one aspect and I would say rather technical aspect erm of sustainable design erm I think that it's it's we are actually not very good at predicting how a product will actually be used and let me let me give you one example if you take something like the the the apple iphone or smartphones I think I think it's it's we can assume that a company like apple probably has all the resources in the world to do incredible an an incredible amount of research and also about thinking about the future and how their product will potentially be received how it will be used and so on but I think they will never ever have anticipated how smartphones have changed er intimacy communication language erm er ideals of beauty and so on and so forth erm it's impossible to anticipate the actual effects that products like this have on society and and us humans and I think erm one one way of working with it is not so much to try to erm control even more but to do to sort of erm develop things that are capable of being erm adapted
220	I	mm
221 222 223 224 225 226 227 228 229 230 231 232 233	P1	and so I mean it's a very very simple er product I mean it could have existed already a hundred years ago looks very much like a like a Bauhaus erm er kind of furniture and erm I'm pretty sure you will ever you will probably find erm when you look through the the Bauhaus archive er you will find furniture that are very very close to it but this wasn't really really that's not really the point because erm er I think erm for this project there was a certain there were certain requirements and erm this this shape turned out to be a very good fit and erm and and yeah so that's that's um um yeah

234 235 236 237 238	I	so it sounds like the most important decision I was gonna ask which is the most important decision in terms of sustainability it sounds like it's definitely the form and the shape of the product rather than material concerns
239	P1	yes so I mean the the problem
240 241 242 243 244 245 246 247 248 249 250 251 252		so I think there's a there's a general erm erm when you have let's say you have two pens of course you could probably say that one is more sustainable than the other when you look at the material side of it erm but oftentimes the comparison is erm not that simple and I think it's you cannot generally say that a product is sustainable and it always depends how er what kind of conceptions come along with what it provokes how it will be used and so on I mean if you take with coffee to go cup and you erm you tur you make it recyclable then you also justify drinking coffee to go and make it even easier
253	I	уер
254 255 256 257 258 259 260 261 262 263 264 265 266 267	P1	so what so it's it's very complicated relationship erm er and it's it you cannot easily just say that a product in itself sort of as an inherent property is sustainable the same with erm with with the need or use I think erm I just just recently saw also in an interview by erm a tutor that I had at the ((university name)) and he said that if you think about it a pen is erm if you don't know about writing with a pen then it's really just some material put together you know it's all in our heads that this is a pen and that this is er has a certain function and that this may be erm er yeah responds to certain needs maybe so yeah yeah
268 269 270 271 272	P1	okay so if we can talk a bit more about how you decided on or came up with and kind of finalised the form what process did you take working with your your partner in terms of coming up with and deciding on the form
273 274 275 276 277 278 279 280 281 282 283	P1	yeah well I think as erm I think furniture designers er I like furniture design a lot because it's you can easily erm start to work in one to one prototypes erm and when you think of other disciplines like maybe architecture then of course and then one to one prototype would be a crazy thing erm so er that was I think at the beginning very often we draw erm so drawing is a really really important thing but also what I mentioned earlier is that when you draw something it's not that you know upfront what you will draw

284	I	уер
285 286 287 288 289 290 291 292 293 294	P1	and basically you draw something and then you look at it and then you go ah okay that's that's not quite how I thought about it but er and then you iterate again so it's always this circular erm movement if or development that you erm you do something and then then this something responds to you same with language I erm I don't know what I would say in three sentences so I developed my my thoughts yeah and hear them more or less
295	I	yeah definitely
296 297 298 299 300 301 302 303 304 305 306 307 308 309	P1	yes that erm so drawing was definitely the first thing and then we very quickly went into one to one model making and that erm I think in it's always about erm finding quick solutions how you can erm simul simulate something so for instance in the office of course we don't have a steel bending tube steel bending machine erm because this is something that you that industry has er and so we would er actually buy those grey erm electro er these these plastic tubes and then we three d printed the radius and erm then we put it together so we already had an erm at least a visual one to one representation of the thing er how it will look
310 311	I	and so you decided it was steel tubing quite early on
312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333	p	um yes I think so yeah I mean a erm it's it's I I would always say that an a good idea is certain things come together so erm it's if you think of er design as as cooking for example then when you just have salt er salt is not a very good idea in itself you know but salt can be really very helpful when you when you cook but you need other ingredients to make to create a good dish so erm and I mean I'm I'm er yeah not an not an a chef er a assume that er if you develop a something new that you iterate and that you start with certain ingredients as and then you try it out and erm some things work some things don't and you then you replace things and slowly erm the the sort of yeah you you you go maybe where you find a certain quality that you that you er were thinking of and erm so it's not that the the idea of the steel tube was it was there quite early on but it was also there there because we knew that we had to use erm a production method that is easily ex((inaudible)) that doesn't that where we don't have we don't have investment for tooling

334 335 336 337 338 339 340		er we we know that it will be very sturdy at the end of the day erm there are already erm erm in terms of the erm other progresses are already there we don't need to er invent the process to production wise because we can just erm yeah basically tell someone can you please build this for us
341	I	yes
342 343 344 345	P1	and that was of course very important erm this is what in my in my maybe I can talk a little bit about my PhD erm I'm talking and I'm er interested in path dependencies
346	I	uhu
347 348 349 350 351 352 353 354 355 356 357 358 359 360 361	P1	so how erm on the one hand design is always about projecting erm your ideas into the future and how they will possibly be erm er received let's say and and erm but then it's this is always based on what is already there and it erm it's it has a lot to do with erm yeah you know I would say sort of like weaving your er I have developed these thoughts in german so it's I need to translate them now for the first time but it's I would say you're you're you're connecting certain certain er dots that are out there and erm yeah so this is what I wanted to say is that the decision to to create it from steel tube erm came along with certain erm potentials that we saw when we use it and erm yeah
362 363 364	I	yeah so you didn't er you know from your past knowledge and experience that this erm is a good choice and a logical choice
365 366 367 368 369 370 371 372 373 374 375 376 377	P1	yeah exactly also and then also in terms of sustainability which we had in mind of course erm was that with steel you have quite good erm yeah recyclability rates and the the paths for recycling steel are already there so when we use another yeah if we would have used another material then this could have been much more difficult and now we know that if one day this product er erm yeah I don't know will be thrown away that we can be pretty sure that it's erm there is a certain material value erm that it will probably find its way in the right path erm paths to be recycled
378 379	I	yeah and it doesn't really need much dismantling from other you know components
380 381	P1	yes yeah exactly I mean it another decision that was erm that was made was with regards to its erm

382 383		the surface of the the and if so I don't know if you see it but it's basically erm it's very rough
384	I	yes
385	P1	but it's erm it's the same it's zinc coated
386	I	uhu
387 388 389 390 391 392 393 394 395	P1	and that's the same that you will find erm er very often on steel parts on construction sites like scaffolding or erm yeah some fences erm and so on and it's basically a material and a surface that you will find outside and not so much for furniture that is used inside but we deliberately chose this erm this this surface because erm it's it's almost an invitation not be too careful with it
396	I	mmm
397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418	P1	and that was because we the the this seemed to be as I said we wanted it to be used you know it should you can you can you can place it like this you can place it like this [gesturing different ways] and erm if if it was a was a surface that would easily scratch then erm of course you would be much more careful with it which also as a as a erm has a sort of value of course er but for this particular erm project and this context right here and it was important to us that you would not have too erm much let's say distance to this thing we wanted it to be to be just grab it and and do whatever you want with it basically that erm er yeah appropriate method of use that was the message that it could send and there are very little of course ingredients that the product has so so every little thing had to be had to to send the right message in and I can I can say that now that it's been used for three years here at the university erm we are yeah I think we knew that it would be used in ways that we couldn't think of and that turned out to be true so it was used
419	I	what
420	P1	sorry say again
421 422 423	I	I was just saying in what way has it surprised you in the way its been used in this thing in what way as opposed to the way it's been used
424	P1	ah
425 426	I	what if you've got the two different ways it can go but what other

427 428 429 430 431 432 433 434	P1	one example was er er in the entrance area there was some erm tiles damaged so one day a construction company came and they had to replace the tiles and as long as the tiles are put there anew and they have to rest there for a couple of days and the guys from the construction company took these trestles to build a fence around the tiles
435	I	oh okay
436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452	P1	that you weren't allowed to step on and this is just one example er for for in there I have like really really a lot of examples also photographed already where people just use this thing for for various kind of yeah reasons and erm in exhibitions and er to build a bar erm for a party and so on so there are there are lots of lots of different erm ways that it has been used already that that we there was even one erm there is now a task for the first semester that they have to er when they when they learn how to three d print they get the task to develop a erm an add on for this trestle a clip that goes on to it to erm and that is sort of their reference er which we didn't think of that it would sort of become part of the erm curriculum and er there are er what else and there there was a task by a erm professor I think of photography and they they built erm sort
455 456 457 458 459		of erm how can you say like like it was a quick task to create er sculptures basically so they would quickly rearrange things and and erm discuss it and so they also used these and lots of other things
460	I	yep
461 462	P1	<pre>and so it's just been it's just being used basically</pre>
463 464	I	yeah it must be really nice to be there to see all of these these uses
465 466 467 468 469 470 471 472 473 474 475	P1	absolutely yeah that's the best compliment is always when I see this thing being used that I haven't thought of er and erm yeah but and admitting I think erm already during the design process that there will be ways that you have not thought of how your thing will be used has a lot to do with sustainability and because we should not think that erm sustainability is a sort of erm if you just plan it well enough then people you know will get it and they will use it the right way I think that is a very it's almost a

476 477 478 479 480 481 482 483 484 485 486 487 488 489 490		totalitarian way of thinking of design and er of of sustainability I think you you should throw things if you if there is the necessity to design something that's not there er then it should be designed in a way that it erm keeps things in flux you know that it's it's er and this of course is on the material side of it and it it's very good if it's recyclable it's even better if it's already coming from if it's already made from recyclable material erm but er this is only one aspect of it then the next thing is about er yeah carefully thinking what are you throwing into the world? also in terms of what will it mean what will it what kind of effects will it have on on society and yeah
491 492 493 494 495 496	I	so you've a lot of the things you've said have to me sort of indicated particular values that you bring into your design I wondered if you could articulate a bit a bit more what what are your personal values that you think are important in doing your design and making the design decisions
497 498 499 500 501 502 503 504 505 506 507 508 509	P1	um yeah I mean as I said I think erm erm wow values yeah er I think we had one teacher that always told that told us try to be amoral when you design something don't don't try to er to to er you know erm in the in I mean it's almost impossible to be amoral because there are always certain certain morals that your decisions are based on but I think this erm as an ideal not to to try to not to be very moral about your decisions and is a very interesting concept I think because erm erm yeah I think in the in the best scenarios erm it will be the people that use the things erm that bring the moral in you know
510 511	I	so what does that mean for responsibility of the designer er
512 513 514 515 516 517	P1	erm yeah I think that that is sort of the responsibility erm that you erm well let maybe I I'm the best thing is to give you some example there are some erm I don't know if you've heard of it but there are for example in interaction design you have these ideas of nudging and erm er
518	I	yep
519 520 521 522 523 524 525	P1	and erm where basically I mean it can it really depends what you make with these kind of theories but oftentimes let's say there are objects that or things products services that have a certain erm ideal let's say we want to do something about obesity and then they erm they erm find a way to address obesity in that thing or service and sort

526 527		of push the people to become better in quotation marks or let's say that they they erm a product
528 529 530 531 532 533		that helps you to lose weight for example but I think that it's erm it's actually quite er how can I say it's quite er unpolite maybe haha to er to design something I mean it's it it always depends how you do it if you just erm design some some some weights for weightlifting let's say
534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549		then erm these this as a product has the openness to be used in many ways but if you design erm an app that I don't know maybe maybe can can track whenever you eat something and then sends out an alert that er you're eating again erm then are this very very different way of dealing with the with the problem let's say erm and in I I can also tell you there are there were some projects at the university where another for example saved energy the one designed a lamp that would constantly like after thirty minutes or so it would slowly switch off so you need to switch it on again and you're constantly reminded that you're using energy and I think this is a this is one way of becoming conscious that you're consuming energy but erm that from my perspective that would never be the the way to go because I
551 552		think it's way too erm too yeah like the hammer on the head haha
553 554 555	I	okay so again thinking about responsibility but in a different way in this particular design that you've talked about the design of the trestle
556	P1	yeah
557 558 559 560	I	what were the lines of responsibility in terms of who made decisions and signed off decisions and who would take the responsibility for the final design
561 562 563 564 565 566 567 568 569 570 571	P1	yeah so for the erm when it comes to erm the the erm the I think yeah we made basically we made a contract with the university and the erm the university as the erm yeah whose running this building and all the things that are inside it has of course the responsibility that erm people don't get hurt erm and that they would place things here that yeah wouldn't hurt people and that are properly tested and so on so erm if er something would happen erm if someone would yeah hurt them themselves with this er trestle then er the university would er yeah
573	I	yep okay
574	P1	be responsible basically

575 576	I	yep and what about the sustainability impacts who do you think is responsible for that
577 578 579 580 581 582 583	P1	I think there is no erm there was in the whole project erm not really anyone playing the advocate for nature let's say except from us and the ideas that we brought into it which are of course well open to be criticised haha but I think the the only ones who brought in ideas about sustainability were we as designers
584 585	I	and did you discuss that did you explain that to the university client and how did they react
586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605	P1	erm it was we erm well when you design something and you have er a client then its also always about erm convincing the client to some extent er about what's best erm and of course you have to erm erm sort of line up your interests with the interests of the client and the interests maybe of of society but then then again I mean it's er erm yeah how can I say I mean it's erm the the the let's say the sustainability card was was not really played actively in the er in presentations for example because we knew it wouldn't be our sort of best seller er in terms of as an argument I mean erm it's also not that people didn't care about it erm but it it we knew that other aspects erm for example that this thing had to be super sturdy I mean there were a couple of meetings where we had to show with prototypes erm because that was just way more important and discussed and a topic than than erm than the question how sustainable this thing is erm
606	I	yeah
607	P1	yeah yeah
608 609 610	I	just wondered do you think if sustainability had been a priority in the project brief do you think you would have done anything differently
611 612	P1	erm that it depends what what you like what kind of
613	I	уер
614 615 616 617 618 619 620 621 622	P1	force sort of it would have been you know if it would have been the erm the demand to to use a certain material then then of course if it would have been er erm I mean there are yeah it it really depends where you er where you see sustainability kicking in let's say if if er erm because in at the end of the day if the client had said we want this to be sustainable then you er I'm then I would say er the the word has been

623 624		dropped but then it's still what you make from it erm
625	I	yep
626 627 628 629 630 631 632 633 634 635 636 637 638 639 640	P1	erm so erm I mean there are there are erm some very interesting erm developments erm here at er in Germany because we have the erm environmental agency erm which also funds my project and erm they er recently put forward erm a an idea of a erm er how can it er substitution rate erm which means they would like erm companies to erm sorry to erm put out a number erm let's say about how much recycled material is in their products which is a bit erm because at the moment what erm in many indust industries erm companies are er asked for is that they use let's say erm recy er that their products can be recycled but just that because the products can be recycled doesn't mean that recycling works
641	I	yeah
642 643 644 645 646	P1	erm and er if you if you want to make recycling work then erm it's it would be much more erm important that erm er that you already have er ways of forcing companies er to work with recycled material
647	I	mhm
648 649 650 651 652 653 654 655 656 657 658	P1	and erm so this is erm so if if for example if that were would have been part of the brief that you erm er yeah that it's according to this new erm er rule of this the substitution rate then erm this would have been erm a force within the project that would maybe push it into a certain direction yeah erm I mean I can also erm what was quite interesting is that when we er decided to zinc coat it we only thought about it in terms of its well one thing was that the whole façade of the building is zinc coated
659	I	mmm
660 661 662 663 664 665 666 667 668 669 670	P1	so there was this element of sort of er that it becomes a corporate thing erm er and easily recognisable and erm it sort of unites the outside and the inside it's it's maybe more of a I don't know of a nice story erm but it was very important to to get the project through so erm er if we would have just made it in in orange let's say we would have found some some er narrative er where we would say okay we want this to be orange because orange is the colour of the the logo of the university erm then I think it would the

671 672 673 674		narrative would have been weaker let's say erm so it was quite a strong narrative that we zinc-coated this erm just because of it's visual appeal
675	I	yeah
676 677 678 679 680 681 682 683 684 685 686 687 688 689 690	P1	erm but also from our side because of it er er how it provokes a different kind of use however in terms of erm er the if you look at it from a materials point of view then it's not the best erm we I also presented this at the erm the environmental agency and then someone immediately say er said erm why did you zinc-coat it it's erm relatively hard to get zine off or actually most of the time you will lose the the zinc as a material and you will only recycle the steel so this was simply something that we just did not know and erm I'm not sure if we would have known if it would have changed our decision but er we we certainly would have thought about it differently
691	I	yeah
692	P1	so yeah
693	I	okay
694	P1	it's very multifaceted all this
695 696	I	oh yeah it's complicated there's a lot of thought processes
697 698	P1	yeah and also why why I mean at the end of the day you have to make a decision
699	I	yeah
700 701	P1	right about it so it's always about decision-making and erm er yeah and then that's it I mean
702 703 704 705 706 707	I	yeah okay I just have a couple of more kind of broader questions now erm so thinking about the process that you've talked me through in terms of the decision-making for this product was this typical was this a typical way of working for you and making decisions or was it unusual
708 709 710 711 712 713 714 715 716	P1	mmmmm er wha I mean depends what you what you would call typical the erm the way of working in general is I would say in a way typical I mean there is a certain erm way that I work and that I erm yeah invest sort of or investigate er er let's say erm and how I erm I for example the aspect of model making erm is very important in my work and I in that sense it's quite typical but then again er each project brings along a

717 718 719 720 721 722		different kind of constellation of requirements and actors and erm and erm so the it will always be give a very different erm dynamic I guess in each project for instance for example with this project you have a you know that it there will be five hundred pieces erm and they will be used in
723		a certain building and you you sort of the
724		building you you almost you almost know the users
725 726		quite well or you can more or less anticipate
720 727		what will happen erm but if you let's say would erm design something a piece of furniture for a
728		company that distributes furniture them erm you
729		basically you don't really know who the final
730		user will be er you most of the time you don't
731		really have a real real connection to them or
732		they erm don't play an active role in the er
733		designing of the thing I mean so erm there are
734 735		other dynamics I would say in the the erm and then also in the process like this when you have
736		a company that produces furniture they come along
737		with er a certain erm yeah er set of machinery er
738		certain traditions certain market let's say that
739		they erm are aiming for and so on so erm you need
740		to weave your your ideas into that kind of er er
741 742		network let's say and erm erm which is then different erm than when you're working with
742		someone who basically has the erm yeah is more
744		like so this was more like maybe like an interior
745		design project
746	I	mhm
747	P1	in a sense or interior architecture erm
748 749 750	I	a very similar question related to what you just said erm were the lines of responsibility in this project typical or unusual
749	I P1	said erm were the lines of responsibility in this
749 750 751 752		said erm were the lines of responsibility in this project typical or unusual
749 750 751 752 753		said erm were the lines of responsibility in this project typical or unusual  erm yeah I would say so because erm yeah because I think in terms of responsibility when you work with erm with the university erm the every er
749 750 751 752 753 754		said erm were the lines of responsibility in this project typical or unusual  erm yeah I would say so because erm yeah because I think in terms of responsibility when you work with erm with the university erm the every er aspect of reliability responsibility erm er is is
749 750 751 752 753 754 755	P1	said erm were the lines of responsibility in this project typical or unusual  erm yeah I would say so because erm yeah because I think in terms of responsibility when you work with erm with the university erm the every er aspect of reliability responsibility erm er is is erm is very very structured and organised already
749 750 751 752 753 754 755	P1	said erm were the lines of responsibility in this project typical or unusual  erm yeah I would say so because erm yeah because I think in terms of responsibility when you work with erm with the university erm the every er aspect of reliability responsibility erm er is is erm is very very structured and organised already mhm
749 750 751 752 753 754 755 756	P1	said erm were the lines of responsibility in this project typical or unusual  erm yeah I would say so because erm yeah because I think in terms of responsibility when you work with erm with the university erm the every er aspect of reliability responsibility erm er is is erm is very very structured and organised already mhm  so erm there are not many er erm er loopholes er
749 750 751 752 753 754 755 756 757 758	P1	said erm were the lines of responsibility in this project typical or unusual  erm yeah I would say so because erm yeah because I think in terms of responsibility when you work with erm with the university erm the every er aspect of reliability responsibility erm er is is erm is very very structured and organised already mhm  so erm there are not many er erm er loopholes er form erm in terms of let's say the law you
749 750 751 752 753 754 755 756 757 758 759	P1	said erm were the lines of responsibility in this project typical or unusual  erm yeah I would say so because erm yeah because I think in terms of responsibility when you work with erm with the university erm the every er aspect of reliability responsibility erm er is is erm is very very structured and organised already mhm  so erm there are not many er erm er loopholes er form erm in in terms of let's say the law you know erm everything in er every student is sort
749 750 751 752 753 754 755 756 757 758	P1	said erm were the lines of responsibility in this project typical or unusual  erm yeah I would say so because erm yeah because I think in terms of responsibility when you work with erm with the university erm the every er aspect of reliability responsibility erm er is is erm is very very structured and organised already mhm  so erm there are not many er erm er loopholes er form erm in terms of let's say the law you
749 750 751 752 753 754 755 756 757 758 759 760	P1	said erm were the lines of responsibility in this project typical or unusual  erm yeah I would say so because erm yeah because I think in terms of responsibility when you work with erm with the university erm the every er aspect of reliability responsibility erm er is is erm is very very structured and organised already mhm  so erm there are not many er erm er loopholes er form erm in in terms of let's say the law you know erm everything in er every student is sort of er erm yea everything is it's er it's erit's
749 750 751 752 753 754 755 756 757 758 759 760 761	P1 I P1	said erm were the lines of responsibility in this project typical or unusual  erm yeah I would say so because erm yeah because I think in terms of responsibility when you work with erm with the university erm the every er aspect of reliability responsibility erm er is is erm is very very structured and organised already mhm  so erm there are not many er erm er loopholes er form erm in in terms of let's say the law you know erm everything in er every student is sort of er erm yea everything is it's er it's er it's er you know what I mean

765	I	they follow the rules
766 767 768 769 770 771 772 773 774	P1	yeah everything is sort of has some rules like the the table desk that I'm working on there is probably somewhere a number on it and then it's er er there is somewhere a facility manager has a erm a list where this desk is listed in this room and erm so from from from yeah so so from that point of I think the the responsibility and reliability and so on I think it's very erm typical in a sense yeah
775 776 777	I	and if you were working for a different type of client you would still see the responsibility being with with the client
778 779 780	P1	I mean in erm oftentimes in product design the the main responsibility erm of the erm designers is that you don't infringe copyright
781	I	mhm
782 783 784 785 786	P1	I think that's the that's the biggest thing if I also think about contracts is that I erm have with companies then the only thing where I am really really erm responsible is that I don't present any ideas to them that belong to others
787	I	sure
788 789 790 791 792	P1	because if that happens then then they will they will be erm sued then erm I think that will come back to me erm but er in terms of the product erm reliability er that usually erm yeah er the company er yeah
793 794	I	yeah and so year so the client is responsible for the safety and ((inaudible)) aspects
795 796	P1	and in terms of responsibility in terms of bringing sustainability in
797	I	yeah
798 799 800 801	P1	erm I think erm yeah I mean there are some companies that are erm willing to do a bit but erm most of the time er the the industry just does what what's within the law
802	I	yeah
803 804 805 806 807	P1	everything that is possible within the law will be done and erm so er you only find very few companies that that are willing to do more for for the environment just because of er let's say goodwill goodwill or yeah
808 809	I	so that points to responsibility being with government even

810 811 812 813 814 815 816 817 818 819	P1	yes yes I think the erm definitely that the government has to erm come up with erm certain rules er I I don't see any other way of erm yeah I mean cer yes there is a societal erm awareness that is rising about these kinds of issues but erm erm at the end of the day if if there are no erm no rules erm then there are no rules haha yeah yeah as long as I can just put so two materials together that don't really belong together and cannot be recycled but as long as I can do this er and sell it
821	I	yeah
822 823 824	P1	er I don't I'm not even responsible of the the erm erm you know the whole process of the when it's thrown away and er that it
825	I	yeah
826 827	P1	gets to the right er channels erm then then how yeah then I don't see how how we can
828	I	yeah
829	P1	become more sustainable erm yeah
830 831	I	okay well on that note haha those are all the questions I had erm
832	P1	okay
833 834 835 836	I	erm that was really really interesting so useful for my project thank you so much erm was there anything that you'd like to add that you thought that I might have asked about but I didn't
837 838 839 840 841	P1	erm trying to think er you said yeah you ask a lot about responsibility I mean the the erm one thing that that I find quite interesting is the that there is this erm er the question of how participative design can be or has to be
842	I	mhm
843 844 845 846 847	P1	then you but then of course you get into erm because very often it it's said that erm you know you that that the actual users the final users of the erm of the product should be should have a say in in the design
848	I	yeah
849 850 851 852 853 854	P1	of things and erm and then there are these erm er I mean a lot of things have been written about this and also that they are that there are different levels of participation that you can erm you know you can just just ask the users you can erm er yeah up to a point where you where you

855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881		don't see the as a separate community but where where you are actually part of the community and erm yeah but erm and that that's something that er I also find very interesting erm because it the question of how erm because design is basically a discipline that or as a discipline that erm er started to to develop erm through the industrialisation and the division of labour and erm and but but how erm and I think this creates a lot of problems in terms of sustainability and also responsibility because by the division of labour you basically have a lot of specialists and erm products are erm yeah going through the hands of so many people the erm the before they are then finally used erm and I think erm that er when when nowadays we talk a lot about erm er the the circular economy as an as an ideal erm which to me is a little bit of the wrong image I would say so the image of a circle I don't really see how erm how the circle I mean as an as an a very very big er erm abstract idea I I I see it but erm I think if you look at it a bit more closely then erm it's it's much more about a erm rearranging erm the the network how we use so I see it much more as a network and not erm as er that we are now at a linear erm er way of producing and erm
882	I	yeah
883 884 885 886 887 888 889 890 891 892 893 894	P1	er the value chain but er er the and we should we should make a circle out of it but I think now we already we have certain erm paths er and I think we need to find ways to more clever connections that we create because erm I think it's a very naïve idea if you if you have erm the circular economy and oftentimes you you erm then design is placed somewhere er on that circle and of course plays a big role but erm I think it's a bit of a naïve idea to to like design a product and then release it into the world and then almost say like oh alright good luck haha
895	I	yeah
896 897 898 899 900 901 902	P1	you know erm and I think er it has to be much more about erm bringing er all the actors that are er along that circle er together and connecting them and er this I don't really see in in the most of the concepts on on circular economy erm it's still it's er very linear it's er
903	I	linear circle
904	P1	being it's er

905	I	yeah
906 907 908	P1	one connection is made and that's the connection between er where the waste is and where the sort of
909	I	the end and the beginning
910 911 912 913 914 915 916 917 918 919 920 921 922 923 924	P1	right the end and the beginning is but erm it's still very very all the rest is not really erm working together I think we could er in yeah it would be super nice to have erm projects where and I and we actually have some research projects here at the university where you put erm for instance the erm people from the recycling industry people from the waste er erm collecting industry er the the actual er yeah people that use the products erm you know the ways that are taking care of distribution and so on and erm marketing then this this the designers the production side maybe even the miners and all all of them together then erm come up with something that erm that works in the whole system
925	I	mhm
926	P1	I think that's er
927	I	yeah
928 929	P1	because the products are really just the the tip
930 931 932 933 934 935 936 937 938 939		of the iceberg and er there is so much underneath erm that needs to be er thought of and then in in terms of I think we also need to decentralise the the user so I don't think we we should erm we should think of them er more like the products as erm as guests I would say that are temporarily for a while with us and then they they disappear again and erm er we shouldn't focus too much on the er user-centredness I think that er this er yeah because it also it goes along with the of course erm er very anthropocentric
930 931 932 933 934 935 936 937 938	I	erm that needs to be er thought of and then in in terms of I think we also need to decentralise the the user so I don't think we we should erm we should think of them er more like the products as erm as guests I would say that are temporarily for a while with us and then they they disappear again and erm er we shouldn't focus too much on the er user-centredness I think that er this er yeah because it also it goes along with the of
930 931 932 933 934 935 936 937 938 939	I P1	erm that needs to be er thought of and then in in terms of I think we also need to decentralise the the user so I don't think we we should erm we should think of them er more like the products as erm as guests I would say that are temporarily for a while with us and then they they disappear again and erm er we shouldn't focus too much on the er user-centredness I think that er this er yeah because it also it goes along with the of course erm er very anthropocentric
930 931 932 933 934 935 936 937 938 939		erm that needs to be er thought of and then in in terms of I think we also need to decentralise the the user so I don't think we we should erm we should think of them er more like the products as erm as guests I would say that are temporarily for a while with us and then they they disappear again and erm er we shouldn't focus too much on the er user-centredness I think that er this er yeah because it also it goes along with the of course erm er very anthropocentric yeah  worldview and I think that that is a bit
930 931 932 933 934 935 936 937 938 939 940	P1	erm that needs to be er thought of and then in in terms of I think we also need to decentralise the the user so I don't think we we should erm we should think of them er more like the products as erm as guests I would say that are temporarily for a while with us and then they they disappear again and erm er we shouldn't focus too much on the er user-centredness I think that er this er yeah because it also it goes along with the of course erm er very anthropocentric yeah  worldview and I think that that is a bit problematic because yeah

949 Р1 one er one very important concept that I haven't 950 mentioned yet is the erm that I think that er 951 that erm how can I say this I think that 952 designers are quite well at erm looking at the 953 world not as something that is fixed and that 954 they saw that they see the the contingency I 955 think is the word of the of the world erm that 956 that nothing is really erm sort of has to be that 957 way and in a design process I think for a moment 958 at least at the very beginning erm the the in 959 a way even when you design just a small thing 960 like er a cup or a door handle just for a moment 961 I think the the world is completely deconstructed 962 Ι yeah 963 Р1 and then you you erm er think about erm which 964 parts are actually good as they are and should be 965 continued and er and also contained and er erm 966 and and yeah then you start to to slowly erm 967 weave your idea into er what is already there er 968 I would say and erm er and I I did an internship 969 at ((companyname)) which is a sort of London-970 based er design office and they oftentimes talked 971 about their work as erm er erm a way of 972 correcting things in the world so I I quite I 973 mean the the erm if you think about for example 974 the text and you write a text and then someone 975 else proof reads it also in terms not just in 976 terms of er grammar but also in erm what is 977 actually written erm then erm this person scans 978 the text and er looks for certain errors or 979 mistakes in the argument and er and so on and so 980 forth and erm and this this process I think it 981 has a lot to do with er design it's not always 982 about er yeah creating something entirely new erm 983 er it's it has a lot to do with erm making erm I 984 I would not use the word correction erm because 985 it has yeah again a little bit of erm this this 986 aspect of I know what's better I would rather say 987 erm you do small interventions in the world you 988 you intervene in a way so to me the product is er 989 is an intervention is erm and most of the time 990 you do this inter intervention and then you you 991 are surprised what's happening 992 I yes 993 erm yeah I there's this quote by erm an artist 994 called ((inaudible)) and she said erm er was it 995 'we live the surprise results of old plans' and I 996 think there's a lot of there's erm this erm can 997 relate to this very much because you when I see 998 things erm and I think this is the to me erm sort 999 of the designerly ways of looking at er at the

1000		world is that you also see the traces of other
1001		designers and you try to erm imagine what was
1002		their process and what what are they trying to
1003		tell and what are they how this how did this
1004		thing come about what were the forces behind this
1005		erm er and and yeah that you try to to
1006		deconstruct the the things that are around you
1007		and erm yeah
1008	/end/	