I: (0:01) So my first question is; how would you briefly define circular economy and sustainable consumption in one sentence each

P: Okay, circular economy is a perpetually cycling from positively defined materials, build, created with renewable energy in a social fair way, with respect for netto capital bio-diversity and social fairness.

I: (0:40) Okay, and sustainable consumption?

P: That’s another question, that’s a challenging one.

If you really want sustainable consumption you should consume maximum as much as the globe can give us. Period. In a, in a, that’s also important, in a honest way I feel we need to, in a sharing way and not like me sharing with the neighbor, but me sharing with people who don’t have anything.

I: (01:36) Just one more comment for you, I have lots of questions that really are very much about the future, if you need some time to think, just feel free to just think about it, I will give you the time for that. Don’t feel that you have to like say something straight away, it’s fine to take some time.

I know that some question might be a bit trickier, you might not have thought about that, that’s fine. So, how would you explain the key characteristics of the future circular economy to others, for example friends or family who don’t really know anything about it.

P: Again, I would like to avoid the wording of circular economy, because currently circular economy is abused by everybody, so I don’t like it. I still keep my thoughts within cradle2cradle because it’s much more defined and the biggest benefit of the future crade2cradle economy is that we have an economy where we, consumer, produce, in a beneficial way for humans and nature. That would entail that everybody can consume equally, that we do not strive for growth but we strive for maintaining what we have

I: You mean as a company or as a consumer?

P: Everything, I’m talking about, we’re talking about economy okay?

So that a company shouldn’t grow, but persons should stop consuming more. People, let’s face it, there are many people on this globe, who do not have even 20% what I have, and are still happy. So, materials, products etcetera etcetera is not key for happiness. And therefore a cradle2cradle economy is an economy where the value is not money, but the value is happiness. That is what we need to strive for, the growth of happiness. Then with the products need to be obviously, be supportive, but products will play a smaller role and obviously they are perpetually recycled, as I mentioned, with positively defined materials, the way cradle2cradle defines positively, taking care of the environment, so to not chop more amazon, stop that and try to balance out the ecology we currently have, as you have, we’re already consuming the capabilities of the earth. We’ve already consumed that in august, or even sooner, so we have to regain that, and we need to realize, I mean, everybody is talking about 9 billion people and 1 year later, we’ll have 10 billion people. All these people want children. So you need, we need to stop growing, which is a challenge. For me, to be honest, it sounds like utopia, but I think it’s the only way to survive as humanity, we can not, unless we’re building our fantastic future on the bold globe called moon or mars or whatever, this is not what we want, we want to breathe fresh air, etcetera etcetera, everyone wants to do that. So we really need to reconsider the value and consumption. Consumption is only perceived obsolescence. Why do I need my iPhone number 9 after one year, for instance? Does that answer your question?

I: (06:29) Yes and actually answered already some of the other ones so I, was really, that’s a very good answer.

You already started talking a little bit about my next question, and that is; imagine a truly circular economy, or a truly cradle2cradle economy, how would consumption change and why? I mean you started touching upon that, but could you expand on that?

P: The consumption will not change just like that.

I: Okay

P: I do not believe that, because, there is something in people that drives them to want more. And people in the 50s there was this fantastic economist who invented perceived obsolescence. If we do not push our consumer to change, and to say why do you need a new iPhone, why do you need it? It’s still working so what’s the problem? And if we do not create that awareness or if people all of a sudden and say this is crazy what we’re doing, it will not go from it’s own. Either we need a couple of disasters, okay we need to have a flood in Europe killing about 80% of the people, so we can start over again, or we as manufacturers should stop using commercials to push people further towards more consumption. We have to, I would nearly say we have to eliminate the consumption. There is no other way. And I do not believe that even a cradle2cradle economy can solve this, because there is just not enough material around there to accommodate everybody, even if we would be able to accommodate everybody we would not be able to accommodate the whole world in leisure and fresh air etc. etc. So I’m pretty dark about that side, we need some pretty good disasters in order to shake up the people or we need to wake up as an industry.

I: (09:05) Okay, and, if we don’t call it consumption, but meeting people’s needs, do you think that would change a cradle2cradle economy?

P: And who would then define the need of the people?

I: Yeah that is one of the big questions, what are the needs, what do people really need, what do they

P: Let’s face it, we all know the pyramid of Maslow, and the only thing we need is a roof over our head and food.

I: And some social interaction

P: So I don’t need an iPhone. I mean many people with internet with mobile phones with all the social media, etc. etc. Loneliness is only growing because people are working from home. Nobody is having real human contact anymore. Well, less and less anyway. So I think, if we do not drastically change that, it will not really work, otherwise we have another earth to find.

I: Yeah, okay, so you think that even if a cradle2cradle economy would be fully really achieved the consumption patterns of, or the way of consumption of consumers wouldn’t really change

P: Not if people do not feel any negativity around it. For instance, there was a lot of talk about the new generation is more and more in the sharing economy blablabla, and I only think that is true because the new generation living for instance in cities, why would you want to have a car? You can’t park. So it’s just logical that they skip the car, take the bike, and public transportation. Or even say, okay, occasionally going to family, let’s have a shared car. It’s not because they say oh shit, we need to want to have a shared economy we go with the shared car, it is because their situation is different from my generation that A can afford car, there was plenty space to park the car, and it was status symbol tralalala, and not it’s a pain in the ass having a car in the middle of the city. So I think yes the consumption patterns will change, but not on it’s own. We need to manage this. We is companies, and also governments, but the problem with governments is that they listen too much to the companies because they are, everybody still chases growth, as long as we chase growth, nothing will happen. The circular economy, the cradle2cradle economy will not happen. So once if you really look into the idealistic world, we would probably end up in commutes, stuff like that.

I: (12:21) Okay, so let’s….

P: You didn’t expect that answer did you?

I: No, I mean to be honest, I’ve been thinking about those again and again so what would actually look that like? That would be very interesting. Yeah.

Now, less virtual interact more real social interaction living together and sharing.

P: Yes, and let’s face it, people that have nothing, they go wherever there’s something to gain. So if we do not share in Europe with the rest of the world, if we do not downsize our wealth, people will come and get it. You saw it with the refugees coming over in the Mediterranean. People that were walking the Euro tunnel because they wanted to go to the UK. Not only because they we’re afraid to get killed in Iraq, but they thought there is an economical benefit to it.

I: But that’s a normal human instinct, with …

P: Exactly, so go with the flow, and if we do not share, if we do not solve that greediness we have, people, other people will come and get it. There is no doubt about it. The good thing is they will leave certain areas of the world so we have place to go to which is much quieter.

I: That’s a one way to see it.

P: Only see the benefits

I: (14:00) Be positive, right?

Then let’s talk a little bit about the business model. The business model consists of three aspects, that you partly already touched upon. So the first one is the value proposition, the second the value creation and delivery, and the third one the value capture. Let’s start talking about the value proposition. And so the context is in the transition to a circular economy or cradle 2 cradle economy how do you think should companies shape the different elements of theses aspects, so for example, the value proposition is the value the firm offers to specific target customers segment, including the product, and/or product service, and then how they build the relationships with the customers that will change, so what do you think about that aspect, about value proposition?

P: First of all, I come back to my initial remark, let’s redefine value.

Maybe we should just offer the people a place to make or do whatever they want. There is only 1 reason why a company wants to have a value proposition because they want to make more money. So lets stop making more money, so the whole discussion around value proposition etc. etc. it is old, linear financial thinking. I put 1 euro in, I expect 1,10 out. So the financial world is only interested in the circular world because circular companies as they call it, without definition, will survive the next raw material crisis. And therefore their investments are safer there. It’s all old school thinking. We need to go away from that kind of thinking, because if we don’t, we will not survive. We will definitely not survive. What you see is everybody is calculating impact on nature, environmental impact, and usually it is per square meter of per kilo or whatever. So they’re very proud if they show they can reduce, but in the meantime if you produce ten times as much, you still increase your environmental impact. So that’s one aspect. So, I think, nobody, let’s do the thinking exercise, because in regular circular economy, everybody is talking about delivering services. Which is complete bullshit. Because take you as a consumer. As long as you have sufficient money, you can purchase your services from anybody, but as soon as you don’t have it, the service will be gone. The bank will knock on your door. So, I rather want to be certain that my sofa is standing in my room to rest upon, the coming year, without worrying whether I could afford it next year. Once I bought it, even if I lose my job, it’s mine, period, even if I don’t use it. This goes for a lot of things, for cars, for certain things it might be interesting, cars for instance. I know companies are thinking about all these nice DIY tools. It is just that there’s too many of them. The majority of them is not working.

I: (17:57) DIY tools for what?

P: Like a drilling, or a hammer or whatever. So why should we for instance in the neighborhood not put a big toolshed, and everybody can have a, can become a member, pay a fee, get a card and use the tools from that shed. Just suppose for the sake or argument that would happen, the number of tools would drop dramatically. The companies would go bankrupt because they don’t sell anymore. And you don’t need six different sheds, in every street, you just need one. So the whole idea around the product as a service is very tricky. It is a modern thing. It is merely window dressing. So it is about how can I make more money as a company look good again? The consumer, it only goes for business 2 business, that would work, because businesses think differently, they don’t want to own stuff, because if they want to stop producing they don’t have to sell it anyway, and have their monthly fee they can afford as long as they produce. But the consumer also wants a kind of security, they want a kind of, okay and this has nothing to do, I think, with ownership, but it’s just security. I don’t want my roof over my head disappearing this month because I can’t pay the rent, just to name something. And I want to have access to the tool, or whatever, and not wait for, okay I have 1 car and 4 blocks and I have an appointment to get the car to do my groceries. Or even call the supermarket and bring me the groceries. It all drills down to consumption, if we reduce consumption, so the value we should give them is, can we make people happier with less? I think the reason why a lot of people work, is to make money, in order to purchase.

I: (20:30) And in order to be able to do what they actually like to do and what they would like to spend their money and time on.

P: Exactly. But even if you could, if you would consume less, you can do more nice things. As you can hear I am struggling with the thing, I already have a discussion with the Ellen MacArthur Foundation on this, and they struggle with the same thing. So it’s a nice concept and governments are pushing it because they feel that they need to have a robust and competitive economy, but it’s just postponing the problem. I don’t think we have real scenarios for, I don’t think energy will be problem by the way. That wouldn’t be the problem. I don’t think the different materials would not necessarily be a problem, but complex materials, complex products like a phone, I think those kind of products will end up creating a problem. Because it is criminal to come up with a cell phone where you cannot exchange the battery pack. They should put people in jail for that. The only reason why it is like that is because they say, the manufacturer says, this is what the consumer wants. And the consumer believes that. Oh I want the thing. Perceived obsolescence. I was in a time when the smartphones became smaller and smaller because if you would run with an old one, a big one, you were walking with a refrigerator. Today the screen becomes bigger and bigger and rounder and rounder and thinner and thinner. Okay let’s put a chip in each and every one of us, it has the same thing, we can control things with mind waves, so we don’t need the materials, is that what we want, at the end of the day?

I: (23:12) That is a good question

P: We need to be very careful of what we are heading for.

I: (23:19) How do you think should companies change products and services? I mean, consumption reduction and avoidance would be really good, but how do you think companies can do that? Because, that is always one of the arguments for services, that of course if you have services that you might need less physical products, or that they at least last longer. How should that work?

P: I don’t think products as a service is necessarily a bad thing, but trying to grow your business over it is a bad thing. So, if you would have a company with the objective to keep people working, deliver working space, that should be the goal, not the profit. Or your company should be a non-profit organization.

I: Do you mean provide the working space and the work in order for people to make a living…

P: Yeah, a decent living, because then you take away the negativity of making more money. Why is our salary raised every year? So that we can purchase more? Why do I want to buy a bigger house? I think it’s kind of a loophole, it starts with the consumer, they need to realize or be forced, we should put something in drinking water, that people realize that this way of living is actually not what I want, it is chasing something that is, that we can never catch. We will never be able to make enough money. Even the richest guy in the world is trying to gain more money. And then look good by giving the money away, because, look at me being very good, but in the meantime, he is giving, percentage-wise, the same amount of money as anybody in the streets would do. So the companies they should start pushing, if they’re able to, sustainable consumption, which means that, we either make products that last longer, and that could be with little effort, slight changes in design, not taking back and recycling the product, no, the product in use should be able to change the looks, the design. Because why is it that we want another phone or car or whatever? Because it looks different. And we can show off to our family, friends, look at me having a great phone. Nobody is realizing that this phone is actually killing their own environment. And we don’t tell them.

I: Or nobody realizes that everybody has an impact, I think many consumers know that things are bad, but they think I’m one of billions of people, doesn’t make a difference.

P: And we’re not going to tell them, because it would mean they would consume less, and that’s not good for the company, that’s not good for economy, the whole world would collapse if we consume less. We need a paradigm shift, why is it bad to consume less? We need to be able to break through and the only way to do that is via finance. Because money makes the world go round. We need to redefine value. What is more valuable, say in front of a three meter wide TV, or chatting with somebody at the other end of the world, or go to the pub and have a drink with friends? You do the same but for one you need lots of materials, in the other you just go around the corner, it’s even healthier because you go for a walk. And you can actually touch the people. Probably we will be able to build a machine that enables you to cross the world, touch them or smell them or whatever. Technology can solve everything, the question is do we actually a have a problem? One of the biggest things I feel is lacking within all the smart people working in this area, is we do not ask philosophers, we don’t ask psychologists. Because the psyche of people is crucial. Why do we want things? The philosopher is able to disconnect reality and helps us see what we’re actually doing. They’re not their, they’re the big absent, and the bankers, but the bankers know damn well they don’t want to have a second problem in their lab, for sure.

I: (29:13) I will tell you a little bit later what I think. Let’s talk a little bit more about value creation and delivery, we already talked about technology and product features and a bit about activities. What do you think about key resources, how should they be used in the transition by companies, things like tangible resources, intangible resources and human resources. What do you think are the key resources and how should they be used in order to achieve cradle 2 cradle or circular economy?

P: First of all, as I briefly touched upon, we need to dematerialize functionality. So we really need to rethink the products we’re making because all the products we’re making are having a functionality. As I mentioned we have materials like limestone, soil, that are plentiful available. Still we don’t want to dig holes all over the place in order to produce our product, so we need to be very careful with resources. My biggest thing is we need to only produce products that can be either re-used or recycled. In the near future is should be forbidden to come up with something that is not for over 80% or 90% recyclable or reusable. You should be put in jail if you throw something away and I think because we need to understand that resources, tangible resources is directly coupled to the intangible ones, like energy, solar energy, even solar energy you need tangible resources. Wind energy, it doesn’t help you from it’s own, you need a windmill to do so. Solar energy the same, actually, it is rare earth metals you need which are called rare not for nothing. We don’t to be depended on China because they have actually all the mines and ownership on rare-earth metals, so we need to be very careful with spoiling resources. Which actually helps the human resources because in order to dismantle you probably need more people. Which means, if you’re looking at the current products, not really easy to dismantle or recycle current products that are currently in the market. So, you need to have this continuous improvement loop where recycling becomes mandatory, hence, you need people, and there are plenty of people who don’t have jobs at all, so you can do that. So the recycling should have over 98% effectiveness rate, so that material are re-used at the same value-level they initially came from, it helps people to a job, and it preserves materials. I think that makes, recycling makes the world go round.

I: (33:20) That would be nice.

And what do you think is then the role of partners and suppliers, or what should be the role in the transition of partners and suppliers?

P: If you look at nature, there is no clause of recycling in nature. Nature has metabolisms, and we should think in the lines of metabolisms rather than closed loop. The reason that we start with closed loop is because it’s easy. Because we know this is our materials so I can re-use it, but by defining quality of materials out there, by making them extractable from products you’re no longer having a fixed value chain. So, you are more likely a corporation or, I think in the future materials will become more important than money, and we need to create more strategic partnerships in order to, what happens today is that materials are dug up, sold, reproduced something, stored away or recycled or whatever, and actually you should say, the raw materials that currently in the market in nature or wherever they are, are owned by society. And a company needs to be very careful because it’s not their material. For every kilogram they lose during manufacturing they need to pay society a fee, in taxes or whatever. So nobody owned raw materials, you cannot sell it, you cannot buy it, you can take it, for free and you give it to somebody else, but the one who screws things up in a way that you cannot retrieve that material anymore pays the bill. So that is the other way around, so rather than I own the materials and can do whatever I want, throw it away or burn it, now, I lend the material from society and everything I screw up I need to pay. Then my drive is to make a product that you can extract all the materials as good as possible. And everybody will do so. Because it is cheaper to recycle than throw things away, because if you throw things away you need to pay a hell of a lot of money. That’s the way I see a future working that urban mining is extremely important, that means that what you see, for instance in Asia, that poor people collect materials to get a little bit of money, that will happen here also, only the little bit will be a little more than just a little bit. And manufacturers will want to have that material because there is only one way to add or create value to them or their workers, is to produce with materials. Materials are the most important thing.

I: So as the same time as dematerialization of course there will still be materials needed, but the appreciation will be much higher than now.

P: Yes, well if you try to dematerialize you’ll find that certain things are difficult to dematerialize. Let’s face it, describing the future is not difficult. The route towards that future is what makes it difficult. It is the current legislation, the current way of doing financial business, that is screwing things up

I: (37:50) One last aspect, value delivery, that is more the distribution, how do think should that change? The distribution of products. The way it goes to market and how it actually reaches it’s customers.

P: There’re several different options for several different products I guess. You could think about 3D printers for certain products. I mean, if you want to have a drinking cup, there is no need to carry them all around the world, you just purchase the self-destructive CAD file that delivers you the printing of six drinking cups. The only thing you need to purchase is the raw material, but then again, maybe you have already a broken drinking cup or whatever, so that is an opportunity. I think a startup produces products from plastic waste, so they shred the plastic waste, and 3D print whatever you want, but there are more other products that are a little bit more complex.

Well, I foresee a future where we have 3D transportation, we hardly use the four meter above the highway, or below, I hate to see all these trucks running around like crazy and bringing goods from China to here, so by the time we’re creating a more equal world I think having a legislation that states you’re not allowed to screw up materials, you certainly won’t send it to China because they’re too valuable here. Kind of a local4local thinking, not like okay other end of the world, that means you already reduce some transportation. Maybe we should, as I mentioned, if we have products that with only little effort can be changed in design or performance, you don’t have to ship complete washing machines, maybe just a pump or some electronics or whatever, the rest is already in your house, I think the volume will reduce. The volume of stuff transported from a to b. So you have the 3D printing, the volume will drop, and I think since we dematerializing and if we’re trying to decouple happiness from number of stuff, transport will shrink. And probably it will be more expensive, since how the hell are you going to go from a to b with a big truck if you don’t have fossil fuel left?

I: That would be another incentive to change that for companies

P: I think so. Yeah. I think transportation is too cheap these days. And another problem is that what you see now in Europe, we’re asking the people that don’t have a decent living, so they are 24/7 on the road, because we don’t want to do that, and they’re cheap etc. etc. I don’t think that’s a good thing, because there is no real social fairness in there.

I: (42:30) Then we have completed the business model with all the different aspects, we covered all these different aspects, now my question is can you think of an outstanding example in which some of these business model elements played a role in the transition to circular economy, so cradle 2 cradle economy? So where they have really changed some of these elements in order to achieve a more cradle 2 cradle business model?

P: I’m thinking now very hard, and my answer is no.

There is not one single company, not one single product or idea that really is changing towards a more cradle 2 cradle economy.

I: Like not really, just tiny little bits and pieces

P: Just, scratching the surface. As long as companies are chasing for more money it doesn’t really make sense, that doesn’t work. I could say that if you’re looking at cradle2cradle, waste equals food, perpetually recycling positively defined materials, yes, we have some examples. We have them within \*company\* materials,we exchange in order to be able to recycle, but still, it is not really pushing through because we’re still selling all over the world, that’s one thing, the second thing is: the people, it’s easier for them to throw it away than going through the pain of recycle them, because the recycling process is still too difficult, too costly etc. etc. The business case is not there, why is the business case not there? Because these damn European parliaments, they just don’t want to change. They don’t want to create a level playing field, the only thing they’re doing is keep things the way they are, because they don’t want to have any losers, and we will have companies that go broke because they’re not moving forward, so really outstanding examples towards the true cradle2cradle economy, they don’t exist. If you’re looking at the beginning, you could say, stories are nice, like the Philips one, where they’re selling light, that’s because the LED light doesn’t break down. They couldn’t sell the stuff. Once they sold the LED, they’re out of business, because these lights live forever. So they needed to find another business model, which is logical. The only thing you see here and there is people try to incorporate recycled content, that is good. But, they forget to make that recycled content available for the next cradle. This is where, again, where people focus on recycled content, forget about recyclability. And I know how hard we’re struggling with this, we do have progress. But the commerciality, the commerciality is just not there, because the materials, the virgin materials are way too cheap. Obviously we don’t want to change, we just don’t want to change as an economy.

I: (46:29) Going back to the company level you already said that, and that I’m very aware of that many companies have implemented some bits and pieces of some kind circularity, drawing on one of these examples, what do you think should be the next steps to really achieve circularity or cradle 2 cradle?

P: Well, as I already mentioned, in a lot of cases, we’re talking about creating a level playing field and commercial viability. In both cases it is difficult, creating the level playing field okay, we know how to do it, but our product will be more expensive, so we’re not going to do it because nobody will purchase our product, right? So creating a level playing field would mean that products that are not circular enough, and then the challenge would be, who the hell would define what a circular product is and what is not, should pay more, should pay taxes, so then we’re creating a level playing field. That same argument goes for the viable business case. We know how to recycle and extract the majority of our materials, but nobody is buying them because the virgin is cheaper, in the end it is about make the raw stuff more expensive. But that is a direct, having a direct impact to the regular business. And politicians don’t do that, we as a company cannot change that. So we’re talking about legislation, or about a strong commitment by our customers. But customers will not pay additional money to us, just to feel that they have a good product, that’s not the way it works. We even have examples that the Dutch government is looking into performance based contracting, which is one of the spear points of circular economy, which is absolutely going the wrong way, because they are purchasing highways based on performance based contracting, so the contractor has to perform. If you are using new stuff like recycled material you’re not quite sure how that would work out, right? So you drop the unknown. We are able to sell our bitumen from our carpet tiles we recycled to the road industry, until the government started to do performance based contracting. We don’t know the exact composition, we don’t know what it does, we don’t want to have any risk so we don’t purchase that stuff anymore. Certain things have reverse indications, incentives. Creating a level playing field by, this is for myself a little bit of a controversial topic, because what have I belief in? Making externalities internal. Taking the external costs internally which increases your product, but the problem with that is it costs a lot of money to calculate the externalities. So, on one hand it would be good to make visible what the externalities of each product are, but if the price needs to be paid by the manufacturer, that is not fair because it’s way too expensive. The cheaper way to do that is creating a VAT system where you set a quorum to certain criteria to redevelop, you are in a higher or lower VAT category. We should not, which is currently happening, strive for a low a lower VAT category, because that would mean that the governments would make less money, and nobody wants to make less money. You should the not so good products more expensive at the point of time you’re paying that, if you’re internalizing external costs in the wrong products, they will be more expensive to the market and money rules the market, and then you will see differentiation. Then you are creating a level playing field, and then things will better and better. As long as that is not happening, the circular economy will never happen. At the point it will happen you will see that a lot of company are very nervous and even might go bankrupt because they cannot follow the criteria.

I: (52:02) So you think politics should go first?

P: We as manufacturers have shown that there are possibilities, we are more and more aware of things we need to do, we’re also very careful to do those things that make more money. In order to also the things that don’t make more money or even lose money, we need to gain market. In order to gain market our product should be cheaper even if they’re more expensive than the other products. And the only way to do that is politicians need to act now. Politicians is a very special breed, in Europe it’s well we want to have a free economy, so everybody should be able to sell stuff, but we don’t want that, it’s not because we don’t like Chinese products, but they need to follow the same rules as we. It’s not because we don’t like other products that are working here but they need to be following the same rules, we all know we need to do something. Nobody is really acting. It is really time for governments, for politicians, to start thinking in a different way. Because, if they’re doing anything, it will not happen. People that say that sustainable products are cheaper than non-sustainable products, that’s complete bullshit, they don’t know what their product is about, really. They don’t know what sustainable is, or they have a part of sustainability in their minds, but they’re not understanding the key picture. Sustainable products are more expensive and we need to pay for it. And nobody but governments can force us to do that. I cannot force my competitor to make their products more expensive. Why would I put more expensive products in the market and sell nothing? That’s not a viable business case would it?

I: That’s not financially sustainable, is it?

P: Well, the question, the point is, the question is, should it be financially sustainable, what is the value we bring to market. In this case we’re bringing a sustainable product to the market which has a value. The only problem is that that value is not valued by our customers. If you don’t think, that would be the finance world, they force companies usually to make more money because companies are indebted by them. So the financial system needs to change.

I: (55:21) I’m curious to see what is going to happen in the next couple of decades.

P: What you will see is, the next two decades, what you will see is that financial institutions that to secure their investments will start creating criteria towards stronger companies. Like, how robust are you with your raw material purchase, do you have renewable energy, what is your brand value in the market, blablabla, to have their financial investments protected. They don’t want a company to go broke. The other things is we’ll know in 2050 we really, really need to have zero GHG emissions because we just have too much of it, everybody agrees on that, but the only thing is who will take the first step. Everybody is thinking about it so the next two decades you’ll see movement in that direction. I’m pretty sure we will be too late, so we will have some kind of a change, which is good because then we’re more aware, and whether we like it or not, nature is stronger than the human, so human beings will, maybe we will not meet the 9 billion, that’s my point. Yes, you will see movement, I don’t really believe we’ll see a strong movement around circular economy, because, well, maybe certain products, certain products with materials that are either critical or scarce, they might change. As I mentioned, the dematerialization of a cell phone is not that difficult. You just put your chip in your head behind your ear and it works.

I: The question is whether this is desirable.

P: Exactly, that depends, if you purchase your iPhone for like 50 euros a month, including your credit and it raises to 60 or 70 or 90 euros a month, but alternatively you could have your own build in mobile phone, and have your Google eye glass see the whole internet for 50, I’m pretty sure a lot of people will go for it. Not realizing they completely open up whatever they’re thinking to the rest of the world.

I: That’s what I just thought, that’s a bit of a scary thought.

P: Well, yeah. This is the interesting, this is where I think we need to involve psychologist, because why is it that we want that? There are, with an iPhone, with the cells of today, we’re opening up information to a lot of people. Nearly all the apps you’re downloading you have a lot of things you need to accept, if not you can’t get the app. And everybody accepts. And why are we doing this? Big brother is watching you, we have the NSA scheme all over the place, it’s forgotten now and we’re just moving the same way. We have the Trump-Russia affair today, nobody really cares. We’re no longer interested in the other human being. We have too much to lose. The people that have nothing to lose they are full of emotions, they really want to fight for their ideals. But if you have a lot to lose, if I keep still we can pay a little bit more tax, but still I can live in my house, my car, this and this, just work a little harder, no problem. This is where humanity is heading for, and I think more humanity would be a bad thing.

I: (59:59) I agree. Do you have any final thoughts or comments that you would like to share? These we’re all my questions for you, for today.

P: I hope I was able to more or less answer them

I: Yes! Super interesting.

P: Final thoughts? No, I think I mentioned…