We Are Vodafone - Episode 12

Transcript

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Tim Samuels 00:05
This is We Are Vodafone, a podcast about technology and its power to change our world. From AI and the metaverse to flying cars and fruit picking robots. In this series we'll lift the lid on the exciting innovations that are changing how we live and work both now and in the future. In this episode of We Are Vodafone, we're exploring how we can sustainably develop and dispose of technology to help protect our planet. Every year, millions of tons of electronic waste, like old phones, laptops and tablets are thrown away. What happens to these unwanted items when they're discarded? And how do they impact our environments throughout their lifecycle? The production and disposal of tech contributes to greenhouse gas emissions, and the extraction, manufacturing and shipping of raw materials for these gadgets, can also damage sensitive ecosystems like the rainforest. But this isn't all doom and gloom. Today, we'll be talking to experts who will provide innovative ways to recycle and repurpose our tech gadgets, to give them a chance of a second life and minimize e-waste. It's time to find out how to turn trash into treasure and begin the lifecycle of our old tech help create a sustainable and renewable future. I'm Tim Samuels bringing you this series about the power of tech to drive change around the world. I'm joined by Paula Chen, Senior Policy Advisor at WWF and Andrea McCormick, Environment Lead at Vodafone Group.

01:40
It's interesting that you, you both ended up here from very different roots. Paula, what attracted you to this space?

Paula Chen 01:47

It's taken me a long time to get here Tim, thank you very much for asking. I think it's what's called a squiggly career. I started off working in packaging, and was very fortunate to gain experience across lots of different parts of the packaging supply chain. But, it was really my work in the retail space, with some of the better known supermarket retailers in the UK, that I got more involved in sustainability space, and especially around the time when packaging was gaining more attention for being excessive, and recycling, especially. That an opportunity came up with WWF right time, right place, right mindset and what's been great about my role at WWF is getting more involved in the policy side, so facing into government and trying to push them to bring in more regulations, greater ambition, to deal with the triple planetary crisis of climate, biodiversity loss and waste and pollution. And going beyond packaging as well, which sees me looking into different spaces and the impact of different waste streams. And here we are working on this fantastic partnership with Vodafone, and looking specifically at e-waste and very much at mobile phones, which is obviously part of their core business.

Tim Samuels 03:02

One of the big topics that we tackle today with Andrea, the Environment Lead at Vodafone Group, have you had a squiggly journey here?

Andrea McCormick 03:09

I had a little squiggle at the beginning, I think, but it was perhaps a little bit more direct my route into sustainability. So yeah, I started working in sustainability and climate change about 15 years ago. And I've always just had a fascination with the way that the world works. And not just the physical environment of the world and the climate and the biosphere and, and the way that the planet works, but also the way that humans interact with the planet and the way that our society shapes life on this planet as well. So huge fascination with that right through from my academic studies, and then took a little bit of a squiggle at the beginning of my career in IT consulting, where I think I realized some of the skills that are needed to transform business, and how technology is very wrapped up in that transformation as well. Interesting learnings but I was constantly drawn back to that, to that love and that first fascination with the physical world, which drew me back into a career in sustainability and climate change consulting across lots of different industries, before I moved first into the energy industry, and then now the telecoms industry. Learning all the time because the world continues to change. But yeah, fascinating journey.

Tim Samuels 04:25

Vodafone and WWF have this partnership, which we'll explore in a bit. But is it relatively novel for an NGO to be working so closely with a big company?

Paula Chen 04:36

In the case of WWF, it's not novel at all. It's not unusual. And in fact, through businesses, we can drive some of the biggest systemic changes and it is about tackling the systems that our businesses operate within, the public that citizens consumers call them what you want operate within. So we have explored partnerships with many large corporations, household names in finance, in television, in retail, as well as technology like Vodafone. And we at WWF truly believe that, if we partner with some of these leading names in their industries in these different sectors, that we can demonstrate and showcase what's possible, when you put together the world's largest conservation organization, and some of the world's largest organizations, private organizations, and really try and shift those sectors to make improvements where they can in systems. Interestingly, finance and investment is a big area for us. And, Andrea, you know, I think that's a growing risk for businesses, that you see a lot more shareholder activism, where investors are demanding that businesses are assessing the risk, are really looking, and investors are really looking to future proof their investments. And that's where sustainability comes in the whole ESG environmental sustainability and governance agenda is really growing, because without a healthy, sustainable planet, without healthy communities living on those planet, there will be no business eventually. So we've got to really focus on it. And there are different ways and different means that we can do that through partnering with these incredible businesses.

Tim Samuels 06:35
In the long term interest, it makes sense for businesses, obviously, to keep the planet going. But do you find there's a tension, sometimes between a company's need to maximize profits and shareholder return and what you're trying to achieve?

Andrea McCormick 06:50
I think there are always tradeoffs. And we do see that and I think, a lot of the progress that we have made over the past decade, as businesses, it has been, you know, some of those have been quick wins and low hanging fruit. I think now that we're looking at transforming to get to net zero, there are some more difficult conversations to have about the tradeoffs that we need to confront, and that we need to recognize and then really work on. So you know, circular economy is a perfect example of that.

A circular economy is, I guess, the opposite of a linear economy. So in a linear economy, we decide we want a product. So we extract the resources from the planet, we manufacture that product, we use it and then at the end of its life, we throw it in the bin, we throw it in a big hole in the ground, let's say if we landfill it, or we burn it. And that's a linear economy, because we're making it, using it and then throwing it away. In a circular economy, we see nothing as waste. So we make a product, we use it, at the end of its life, we decompose it into its component parts, we re-use part of it, or we extend his lifetime in some way so that nothing goes to waste and the materials that are in that product go round in a circular way back into the economy. And that's what we call the circular economy.

Tim Samuels 08:11
Paula, give us a sense of the scale of just how much tech or e-waste is doing. What are we up against here?

Paula Chen 08:19
Thank you for asking me that question, Tim. Just to pick up on what Andrea said about the circular economy. So, in terms of overall resource consumption globally, at the beginning of each year, there's a report that comes out called the Circularity Gap Report. And this year, we've seen yet another step back in keeping resources in the circular economy, the world is only 7.2% circular, which means that quick maths, 92.8% of the resources we're extracting and processing from the Earth are not remaining within the system. So I think it's really important to understand that that's issue.

In relation to tech and technology products in in total. Certainly, you know, some stats that I'm aware of are that 85 kilograms of emissions are produced in the first year of use for any piece of tech. And 95% of this 85 kilograms is from the extraction of the resources, the manufacturing processes, and the shipping of the products around the world. But I mean, more alarmingly, the World Economic Forum estimates that carbon emissions from the production and use of devices, such as phones and laptops and tablets, we've all got them in our in our homes, will increase to be 14% of the world's total carbon budget. So that's not an insignificant amount. And to anticipate that growth where we actually should be in a world where we're cutting back on our carbon emissions, it's quite critical that we start to think about that

Tim Samuels 09:56
Just to kind of carry on the thought, if this is a rising figure I guess more people around the world are getting smartphones or laptops and it's a rising percentage, what's the knock on effect then for the environment?

Paula Chen 10:08
Well, if we continue with the linear economy, which is opposite to the circular economy, where we are basically extracting what we call virgin raw materials from very sensitive ecosystems, then that is unsustainable, essentially. Because, we are, the global extraction of metal ores, has doubled over the past two decades and a lot of those materials are coming from very eco, very sensitive ecosystems.

So, I've got one stat here, which says that nearly 80% of global metal ore extraction, and there are quite a number of metal ores in technology that we use every day, originated from five of the six most species rich biomes. So that's mining activities in tropical rainforests, such as the Amazon, which we know is on the verge of collapse. So we've got to

think about these things, the more that we consume. And the more that we consume virgin raw materials, the more we're going to have to mine and extract from these, these places where WWF, in many cases is trying to conduct you know, some significant conservation programs to try and protect these species, these iconic species.

So, the more we consume, and the more we consume virgin resources, the more those landscapes are going to be impacted, the more carbon emissions, we're going to be spewing out into the atmosphere. Hence, why a circular economy is so important. So we can drive down the use of these virgin resources. But there's an economic angle to it as well. There's one recent study that said that if we could recover, from the devices that exist, actually that are hibernating and being stored indefinitely in people's homes, so materials like gold, silver, cobalt, lithium, all materials that are essential to support a transition to net zero, then that could actually amount to over a billion euros worth of savings as well, for businesses, in terms of not having to extract those virgin materials, and recycling and re-using those materials that are already in existing devices that are sitting in our homes and our businesses.

Tim Samuels 12:31
I mean, I know I'm feeling a little bit guilty, because in the cupboard behind me, I have various, like a sort of, like a cemetery for old iPhones, frankly, What sat in there, could be extracted to go into new phones or be recycled in some, some form, or shape?

Andrea McCormick 12:49
So within our electronic device, our waste and used electronic devices, there are things like copper, so most electrical items will contain copper. There's also plastics, which can be recycled, and things like iron and aluminium within the casings as well. So those elements exist in reasonably large quantities within electronic devices.
But importantly, there are some very small quantities of materials within those devices as well, which are very important, Paula mentioned a few of them just now, things like gold, palladium, silver, cobalt, lithium, like these elements, they might exist in much smaller quantities. These elements are really important for us to collect, because they are critical for developing the types of technologies that will need to transition to a more sustainable and renewable future. So we can recover those from waste and, and it's a concept called urban mining. So rather than mining for metals, and destroying those very sensitive ecosystems, we can mine for those metals within the waste that we produce. But at the moment, there's a very low level of that activity going on. So I think the UN estimates that only 1% of the rare earth metals that we use, and that the globe demands comes from recycled sources. So there's a massive opportunity for us to look at waste streams with a

new light, with a new lens to say, actually, this isn't waste. This is a resource that we can mine and we can extract value from that from that waste stream.

Paula Chen 14:29
A recent report came out to say that just in the last four years, there's been an increase in the number of technology items that we are storing indefinitely at home. Unwanted items that we no longer use, ones that are functional ones that are broken, and it's increased from 20 items per household to 30 items per household. So the message isn't yet getting through to citizens that actually we want the tech back, we want the tech back to support a circular economy, to be able to recover those materials that Andrea and I had both mentioned. And I don't think the conversation around critical raw materials has become mainstream yet not in the same way that you know, everyone is aware of, and trying to reduce their plastic consumption.

So it's being talked about in circles, like ours. I've heard it on podcasts, you know, there is a geopolitical angle to it. So that's coming into it a bit more. But we need to try and make this conversation mainstream. And businesses like Vodafone have an opportunity to educate their customers, alongside their industry peers, and really join up on the voices to demonstrate that the sector, the tech sector, really wants to go after this and wants to support citizens to do the right thing. And to get that technology back. And it's part of the premise of the partnership we've got with Vodafone, that we want to deliver that sort of impact at scale across our partnership.

Tim Samuels 15:58
So there is this laudable ambition of collecting a million phones for the planet. How's it going so far, Andrea?

Andrea McCormick 16:03
Well, so far, we've collected about 340,000 phones, which is fantastic. So we partnered originally with WWF in 2022, and launched our 1 million phones for the planet campaign. And over its first year, we collected over 200,000 phones. And now we're up to that 340,000 phone mark, which we're really proud of. And we've got to keep going to get to that to get to that 1 million. So we're encouraging as many consumers as we can to think about the used tech, that they're keeping in those drawers that's hidden away and loved and to bring that back out, and bring it back through one of our trading schemes or through donation to one of our social causes, or just bringing it back for responsible recycling if it can't be used again. And that way, we'll be able to bring it back into the circular economy.

Tim Samuels 16:56

And the phones that you've collected so far, how does that translate into environmental impact?

Andrea McCormick 17:03
Well, we know that by increasing the amount of phones that come back into the system, we increase the supply of phones that can be refurbished, and then resold. And it's really when you sell a refurbished phone, and that displaces the sale of a new phone, that really is where you get the environmental benefit. So we know that a refurbished smartphone has around a saving of 50 kilograms of carbon emissions making its contribution to climate change about 87% lower than buying an equivalent newly manufactured smartphone. But it also means that we remove the need to extract about 77 kilograms of raw materials as we were talking about before. So if we can bring more phones back, that gives more of them the chance to have a second life as a refurbished device. And that helps us to reduce the environmental impact of the technology that we use every day.

Tim Samuels 17:59
And Paula, there's a benefit for WWF too?

Paula Chen 18:04
Yeah, I mean, not only is the benefit from the planet through this initiative, but also for every phone collected, WWF receives £1. And this, of course, would go towards supporting vital on the ground conservation work in some of the areas where actually the minerals and the metals that are mined for phones, for brand new phones, is taking place and causing impacts to precious species in those landscapes. So it's, you know, excuse the cliche, but it's a full circle kind of system that we're working with Vodafone on driving circular economy, raising money for that, and also then being able to deliver those vital conservation programs.

Tim Samuels 18:50
It's clear there are certain things telecom companies like Vodafone can and are doing to help improve circularity. But what needs to happen when it comes to the companies that actually produce the hardware with frequent new releases that create demand for the latest version?

Andrea McCormick 19:05
I think that the big tech manufacturers also have their own environmental sustainability programs that they are trying to pursue. But there's no shying away from the fundamental challenge that the business model is built on making more and selling more. And I think that

is the real challenge for companies, is to look at new and innovative business models, that enable us to have this more circular economy.

So yes, I think consumers play a role. Yes, absolutely. We should all be trying to use our technology for longer. We mustn't always rush out to get the latest technology. If our, you know, our mobile phone is still has still got life left in it, we should continue to use it. But it's not just on the consumers. It's also on the manufacturers as well, to think about the way that we design products for circularity. Can we design them for repairability, durability, modularity, so that we are able to recover the materials in them at the end of life? How do we extend the lifetime of the devices as well through things like repair services, or insurance? These are all services, which I think can help to, to build this different business model that will allow the circular economy to become reality. But it does take multiple players to do that, the manufacturers, the consumers, the retailers, the infrastructure, the waste infrastructure providers, it's very much a systemic problem that requires collaboration and partnership in order to be able to solve.

Tim Samuels 20:44
Paula, given the clout of the companies and the existential threats of the problem. What more can government's do to address the circular economy? And I guess what role can companies like Vodafone play in pushing those governments, or lobbying those governments, pressurizing them? Because you know, these big companies with clout as well?

Paula Chen 21:05
Yeah and first of all, I would endorse everything that Andrea has said, definitely, you know, the circular economy is more than just recycling, it is about enabling different business models, like leasing, focusing on repair and providing repair services. You know, in my family of four, we don't buy new phones, we buy refurbished, and there's a great market. So businesses can be prompting their customers when they're seeking a new device to go down those sorts of routes ahead of buying new.

But your question is so relevant, because there's definitely more that governments can do through regulation, legislation. Both requiring businesses to behave and shift, or rather shift their behaviors in a certain direction that supports Circular Economy principles, but also supporting citizens making it more convenient to hand in their phones for recycling. So for instance, curbside collections where there's waste infrastructure that can support that.

But just talking about the systems issue, I think we also need greater awareness of what's actually happening because confidence in, consumer confidence has dropped off with

regards to recycling, you know, they often don't trust that things are actually being recycled. So we need businesses to have greater transparency, to give consumers confidence that when they are making the effort to do the right thing, that actually their efforts are being rewarded. And they're seeing the system improving, take waste exports, for a start, you know, we've heard a lot about and seen expertise around plastic waste exports, but actually, e-waste exports are a massive problem as well. And they're often you know, vast tanagers of E waste is being exported to the global south, where you have informal waste sector workers who are handling dismantling these, these devices, this technology, with the chemicals, with the materials inside them, that can cause health issues cause local pollution to waterways. So we have to be mindful that the whole system needs addressing and governments have to put in when they approach regulation from that point of view. They've got to think about it from a systemic point of view, and not just put in piecemeal measures to try and sort of scattergun approaches, to try and fix what is essentially quite a broken system that we operate within.

Tim Samuels 23:38
If the government said, "okay, great, we'd love what you're saying, what law should we introduce that would make an impact"? What would that be?

Paula Chen 23:43
Well, at the moment, there are negotiations and have been for a couple of years to develop a global plastics treaty to end plastic pollution, I'd love to see something at a global level, which is going to require harmonization of rules and regulations in how we deal with e-waste.

This is a massive, and an ever growing issue and I don't think that individual nations, when it comes down to it in a few years time are going to be able to deal with this and make the change that we need to see, not only from a kind of geopolitical, critical raw material, material, security point of view. But also through the end of life treatment of these kinds of devices. So I you know, I'm gonna go for maximum ambition here and say that an international agreement on these issues would be most welcome to really raise awareness of how this isn't a topic that's going to go away. It's going to grow, and we need to address it sooner rather than later and not kick it down the road for the next generation to sort out.

Andrea McCormick 24:51
I would definitely support that, Paula. And I think if you look at the parallels with plastic, I looked up at The Blue Planet series that David Attenborough did, which really was, was a real milestone moment in the plastics pollution debate. That was 20 years ago. So you know that consumer awareness around plastics started 20 years ago, I think we are seeing that

same journey now happen with e-waste. So you, with plastics, you've seen it go from initial consumer awareness, to businesses getting involved. And then now a global plastics treaty on the cards, which is fantastic to level the playing field, and to get everybody in the system to work together towards eliminating plastic pollution.

To go on that same journey with e-waste, where we're at the beginning of that journey. So we need to raise consumer awareness, we need to start looking at how we can change the system. And then yeah, 100% would support that regulation has to play its role in leveling the playing field for everybody to eliminate e-waste in the future.

I think one of the stats that I saw, was about the fact that there were 62 million tons of e-waste produced in 2022. And only about a quarter of that was formally recycled. And looking at the growth of that waste stream, we can see that our ability to grow our recycling infrastructure and our recycling processes, that is not growing at the same rate. So that the growth in the waste stream is outpacing our growth to process it by about five fold. So we do need to work as a system to fix this very complex and systemic problem.

Tim Samuels 26:33
The Internet of Things and how that can be used as well to have environmental benefits. How are you feeling about Vodafone's commitment to reduce carbon emissions to net zero by 2040?

Andrea McCormick 26:47
It's really big challenge to reduce anybody's emissions from where we stand at the moment to net zero by 2040, which is our ultimate goal. But I think technology is one of the things that makes it possible, that is an enabler for that transition. And that's the exciting thing about technology. Yes, it has an environmental footprint, yes, we need to manage e-waste. And we need to also manage the emissions footprint that it takes to make the technology. But if you look at the bigger picture, technology has a role to play in bending the emissions curve down towards net zero at such a rapid rate that we need.

Technology can be transformative. If we look historically at what technology has done for our society, the birth of the Internet, the birth of AI. These are able to, these technologies are able to change the way that we operate in ways that we couldn't even imagine before. And we need to reimagine the way that our society and economy works in order to get to net zero.

So I think technology can be a really positive and optimistic thing, when it comes to climate change, as well as having its own environmental footprint.

And when I think about like the ways that we can use technology to do that, it can help us to optimize the way that we use resources, the way that we use energy. So things like a smart home, you could look at your home today and say, how can I use technology to give me data on how I'm using energy and then optimize that so I'm using less? We already see that with things like smart thermostats, for example. But the things that really mean it, I think the thing that is really exciting about technology is the bigger stuff, the bigger picture stuff. So looking at the shift of our energy system going from fossil fuels to renewable, we know that renewable electricity is generated with much more intermittency than turning on a gas fired power station. So in order to be able to balance that energy system, we need to use technology, we need to know, where the electricity is being generated, where it's being used, multiple different points of use, and of generation, all in real time. And we need to balance all of that data and then figure out how we optimize across the system. Technology absolutely has to be at the center of that and I think those big shifts in society that technology will enable are really transformative and really exciting. And that's what we need to continue to, to pursue with innovation in technology.

Tim Samuels 29:16
You keep optimistic, despite the stakes and the news that we're fed every day, I guess to wrap up, what would you say to people who are listening who think, "oh, God, there's so much at stake here? What can I do?".

Paula Chen 29:26
Yeah, and just this morning, I was reading an article about how overwhelming it is. But actually if you take small steps in your own individual lives, then they ladder up to make a difference. So I think just try not to be overwhelmed. Control what you can control. So make the choices that you can make, and I hope that others will come on the journey.

I think businesses have a massive responsibility to solve problems within their supply chains, to decarbonize, as Andrea says, and governments also have a role to play. We can't lump it all on the consumer to make that change. I think that's really unfair. It's got to be a joined up effort across different industry sectors, across governments. And also, it taking individual action will play a role. But a lot of it has to be done in the back, in the front end of the system before these products even land on the market to consumers.

Tim Samuels 30:30
Okay, fascinating. I honestly didn't know anything about the circular economy before. I feel both illuminated, educated and guilty. And I've got a cupboard I need to go and address straight after this call. But in the meantime, thanks for everything that you're doing. Andrea

McCormack the Environment Lead at Vodafone Group with Paula Chen, Senior Policy Advisor at WWF. Thanks for today's chat has been fascinating.

Paula Chen 30:53
Thank you, Tim. Nice to speak to you, Andrea.

Tim Samuels 30:54
Thanks again to Paula Chen and Andrea McCormack for sharing their insights and helping us learn about the issue of e-waste and the role tech can play in protecting the planet. Join me for the next episode of We Are Vodafone for more insider tactics.

I'm off to dig through my drawers to find some old phones. Until next time.