## Simon Mainwaring:

If there's one issue that weighs as heavy on our minds as it does on the planet, it's humanity's ceaseless creation of waste that's choking our cities, land, and oceans. How do we stem this tide of our overconsuming lives? The answer lies in what we make, how it's disposed of, and how effectively it can be repurposed to protect our precious natural resources and provide for what we need. Today, we'll hear from a global authority on solving this issue at scale, someone who can answer the toughest questions about how this problem was created and what we can all do to fix it.

You'll learn where the bottlenecks for waste are, how we overcome them and the role you and your business can play. If you've ever looked in dismay at the waste we all create, you'll want to hear what he has to say. Let's dive in. From We first and Goal 17 Media, welcome to Lead with We. I'm Simon Mainwaring. And each week, I talk with purposeful business and thought leaders about the revolutionary mindsets and methods you can use to build your bottom line and the better future for all of us.

And today, I'm joined by Tom Szaky, CEO of TerraCycle, the innovative recycling company that's become a global leader in recycling hard to recycle materials. And we'll talk about why waste has become such a large and seemingly intractable problem and also how we fix it and how you and your company can take concrete steps to reduce your waste to better serve the future and our planet. Tom, welcome to Lead with We.

Tom Szaky:

Thanks for having me.

# Simon Mainwaring:

Now, Tom, I've got to start off with what might be some existential or abstract questions, because waste is a topic that I am so passionate about. It is so front and center in all of our lives. Here's my first one. Human beings as a species seem to be an exception to the rule in the sense that you don't ever get a sense that other creatures out there on the planet. We've been sharing the planet with them for some time, don't really behave in a way that generates waste, but they play into the more regenerative cycle of life and so on. Why do human beings create waste when it's arguably not necessary?

### Tom Szaky:

It's a really good point. You're absolutely right. Every species, every organism has outputs. Leaves fall off a tree, a chimpanzee poops in a corner somewhere, and so on and so forth. And in fact, crazy. It's all litter as well, which means it's all highly distributed outputs. I would argue that one way to define waste, now mind you, there's many, but one is that it is a useless output to the organism producing it, but it's also a useless input to anything else. And I think that's the key difference between the natural version of outputs like the carbon dioxide and animal exhales or its fecal matter compared to our candy wrappers and our toothbrushes and so on. That idea only came onto the scene in the 1950s.

### Simon Mainwaring:

I was about to ask you, when did that start? Was it the industrial revolution? Was it mass production? What allowed that to go? Was it the sheer volume of what we could create so it outstripped our needs and therefore it became waste? What was it?

Tom Szaky:

I would say that it was complex materials coming onto the scene, which is really plastics and so on. I mean, not exclusively to plastics, but that really became in the '50s. And another thing compounded that the invention and the commercialization and the popularization of consumption. If you take someone alive today, any one of us, we consume today 10 times more of everything than we did before. And there's many things we consume that didn't even exist before. As simple as how many socks do we have in one of our drawers compared to our grandparents.

## Simon Mainwaring:

It's just fascinating to me because it seems like we're almost trying to put ourselves out of business. And I was at a conference a couple weeks ago and I heard Bill McDonough, who wrote Cradle to Grave, speak, and he said, "Human beings, you could argue, are designing for the end of life in that you could only do what we do if it was ultimately going to frustrate or strangle or suffocate life itself." And that seems so alien.

I want to ask you this, why when a designer was designing plastic or, God knows, whatever consumable, there wasn't as part of their design brief some responsibility for the end of life of that product? Whether it's just keeping with the natural order or whether just from a design principle, what happens at the end of it? When did that become okay not to think beyond the immediate need and price point for the consumer?

#### Tom Szaky:

Yeah, it's such an important question. And I think what's going through my mind as you say it, is it's because it's not a natural concept to think about. I don't think, for example, a plant when it sheds leaves, thinks about what happens to those leaves and has constructed them in a way that is somehow beneficial to something else. I mean, let's remember, for example, when trees came onto the scene, there was nothing that consumed trees when they died. There was no fungus and so on, and they accumulated and accumulated and that became coal and oil and so on.

It took 40 million years for funguses and so on and bacteria to come onto the scene that could digest trees. And so it took a lot of time, but the natural order of things will come up with things to digest something else. It just works on it such a slow period. For example, in all the waste we produce, let's say, humans disappear, I am sure things will emerge like plastic eating bacteria and so on. But over a phenomenally extended period of time, that will somehow metabolize all that and make it into something else. It just works at a very, very elongated pace.

And we never ever had the need. If you think about all productions in the dawn of time to ever think about what is the end of life because we made things from natural materials. Our clothing was wool and silk, our furniture was wood, our utensils were just metal mind and simple. Once we created these complex things, this whole idea of end of life surprises, I think, many years later.

#### Simon Mainwaring:

It is our innate and unique consciousness and therefore our ingenuity is being our undoing. We got too clever for our own good in a way.

## Tom Szaky:

Well, and I think this is going to be the test of humanity. I think it's always surprising to me when I read articles that suddenly proclaim, guess what? Octopus have feelings or sharks have emotion. It's crazy to me. I think they all do. That's not really what makes us special. I think what will test our ability to be

special is to think about these things that our animalistic nature isn't programmed to think about, which are, I think, two things.

One is constructing things with an end of life in mind because we have to be responsible to not just produce it, but also be the thing that then later metabolizes that somehow. And then also to really think about our relationship with consumption. Because today, if you put a pile of sugar in front of a mouse, it will gorge itself to death because it is so calorie hungry in the natural environment that it would never have a pile of sugar ever presented to it. We have that and we're gorging and we have to somehow think about, can we rise above that feeling and buy less?

# Simon Mainwaring:

Yeah. And that's what worries me, the polarity of these relationships. There was a time in which we, as human beings, wanted more and therefore we created more to satiate that need. But now there's such an excessive more, that expectation is almost dictating how we see the world and how we show up, so that that's driving how we show up in the world. And how we're going to break that cycle to me is fascinating. And I have one more question before we dive into a little bit to TerraCycle's role and all of this.

Which is I had a guest on a couple of seasons ago, Lynne Twist, who wrote a book called The Soul of Money. And she's done a lot of work with indigenous cultures, especially in and around the Amazon. And they have this understanding that when someone has more than they need, it's actually considered a form of madness because the wellbeing of the individual is a function of the wellbeing of the whole, which turns on the integrity of the whole and the balance of various elements within it. Where did we lose sight, as human beings, of the fact that if I, individually, or us collectively take too much from each other or the natural world it's going to be our own doing?

## Tom Szaky:

Yeah. By the way, Lynne is absolutely phenomenal, good friend and just a good plug out to, by the way. I think a lot of this elevated consciousness and what she does with the Pachamama Alliance and so on is a great way to tap into this. And I think this is a cultural question. And the solution, I believe, will be cultural as well. Right now, if you look at from the 1950s, especially at the height in the '80s and so on, it was status in society equaled how much stuff we had. And it was about how many cars, how many houses, planes, all of that was what we aspired to.

And the problem is everything reinforces that because business wants us to buy things. And so everything, culturally, reinforces that our role is to be purchasers, to be consumers. And I think that's going to be the key question, culturally, for us to think about. Because if you take the environmental crisis, I mean, we're talking about waste today, but if you go to any environmental issue, whether it's deforestation, species, diversity, reduction, climate change, and the whole plethora of these issues, they're all very complicated except they have one very simple genesis point.

Which is we vote for them by buying things, all of us do, myself, everyone. And that is the very simple genesis of it. And that is a very, very difficult thing to turn off. But it will become, I think, the key question for us.

### Simon Mainwaring:

And I completely agree. I think we're going to have to reframe the relative tension between what we need and what we want individually and collectively if we're going to have some sort of future that we can all look forward to. And so let's push in on waste here for a second. I mean, I think the dialogue

around waste, it used to be this great unseen thing. You didn't even want to acknowledge a waste, let alone deal with it in a intentional way, let alone take responsibility for its role in our lives and future. But now this dialogue is everywhere. How much we're creating?

How much is getting recycled? Is it really getting recycled? Can it ever be recycled? And so on and so on. In the arc of the evolution of the dialogue around waste, because these conversations mature and get more sophisticated as more stakeholders get involved, how would you characterize where we are? And it's hard to speak on behalf of consumers and suppliers and everything all at once. But where are we?

### Tom Szaky:

Yeah, absolutely. If we start with the starting point of the '50s, we were leaving very much this idea of reusable, durable consumption. We were leaving the idea of cobbling our shoes and buying milk from the milkman and why we fell in love with disposability, which is the genesis of waste, is because of convenience reduction. These are the things that really seduced us to it and frankly, still do to this day. It's very important to know what are those drivers that drive us to it.

And back then, because there wasn't this idea of waste, it was very much the convenience of throw it away. There's old advertising in the '50s that say, why bother reusing that glass bottle when you can chuck the aluminum one away? And it was blind to the issue, but it was very clear on the benefit of convenience. Now in the 1970s, recycling came onto the scene because we started seeing that there's more and more issues. And I think that was a hopeful solution. It was near the first earth day and so on, and recycling became the first foray into this.

Now there's been a lot of different stakeholders who've tried to use recycling for different things, try to make it more of a solution than it is, or there's been different tensions on it. But I think the most important thing to take away on recycling is what really makes something recyclable is not what people think. I think people, citizens will think that it's about, can that thing be recycled? Is there the technology, the capability for that thing to be somehow processed into some raw material? In the end, it's all about whether a garbage company can make money.

Garbage companies nowhere in the world are legally obliged to recycle what you put in their recycling bin. They could throw it out in front of you and you'd have no legal recourse. They will simply recycle what they can make money at. And that's so important because it'll then drive into what happened from there. But it's all about profitability of a waste stream.

# Simon Mainwaring:

I mean, isn't it shocking? It's all about the money at the end of the day and it's that same instinct and driver, and that's not wrong. But done to excess or to the exclusion of other considerations, it comes with the cost of things that are far more valuable than money. And so let me ask you about this. As I understand it, whether it's Australia where I grew up or now live in the States or whether it's in the US, different markets around the world, and I know you're in the UK and Europe as well, the regulatory aspect.

I mean, there is a national level or federal level, there's state level, there's local councils and communities, and there seems to be all of these break points or gates that you've got to go through which become the eliminators of what can be recycled or not based on cost consideration and what they have permission to recycle and so on. But where is the breakdown? Because not enough gets recycled. And clearly, there's not enough money in recycling at all. Give us a sense of the shape of that landscape that we don't see.

# Tom Szaky:

In the end, the actual only actor that really matters is going to be the recycling company that is either hired by your municipality or council or hired by you directly. Here where I live in New Jersey, I'm allowed to pick my garbage company. But if I moved over to postal codes, it would be in my property taxes. Doesn't really matter. But nevertheless, that garbage company actually makes all the decisions. And that company is going to tell you, here's the things we think you should put in the bin.

But then when they take that recycling bin, they're going to put it in what's called a MRF, municipal recovery facility, which is basically a sorting center. And they're going to put it on a conveyor belt and either through machines or human beings sort out what they can make money on. That's it. And there you get things like aluminum cans have a lot of value, PET bottles like a number one plastic, HDPE sometimes, and so on and so forth. And about 40% of what we are asked to put in the bin likely goes out the other end because it simply doesn't have that economic value.

Now in some countries like Western Europe, is a good example, there is legislative appetite to pass what's called extended product responsibility taxes that basically tax the production of packaging. Not good strangely, but just packaging. And that is then used to benefit that economic equation. What was modestly profitable to process maybe becomes a little more profitable to process. The problem for recyclers is that they have no ability to influence what goes in the waste stream.

You and I, today, could invent a toothpaste right away and we could launch it in any crazy package we invent. And the waste management company who will then deal with that in the waste stream years from now has no right of review. They, simply, will just show up one day. And the big issue in all of this is what's the biggest mega trend in packaging is reducing cost to a recycler that's equal to reducing value. As we make our packaging lighter, thinner, flexible, so on and so forth, it intrinsically makes it less recyclable because there's just less value in there. There's just no purpose to even bother sorting it. You'll lose money on it.

#### Simon Mainwaring:

What is the answer then? Because, I mean, when you think about carbon taxes, another penalty mindsets that are going to force new behaviors in terms of the way companies create products and packaging, how are we going to course correct this? Is it that people are going to be penalized for the amount of plastic they use in any given product or packaging?

# Tom Szaky:

I think that we have to look at this as what can all stakeholders do? And I would hate to say that here's one answer. Because all of us are involved in the world in different ways. We're all citizens, but then we may be involved in it in different ways in what we do in our work. And I think it's about, what can each stakeholder do? As citizens, consumers can put a lot of pressure on companies to make sure that they are providing products that are recyclable, reusable, don't have packaging.

And to keep voicing that so that companies are like, wait, if I don't do this, I'm going to lose my market share, I'm going to lose my consumers. The consistent consumer pressure is really important, and that is benefited by NGOs, putting pressure on journalists writing articles about that. But that's one area of a pressure that make sure companies know that they'll be rewarded if they go in one direction and penalize in another, buy who they care about the most, which is the consumer. Then what can companies do?

Companies can shift their packaging to be more locally recyclable. That simply means limiting what materials they use and adding value back into the pack. Now that's going to be a cost for every package

produced. Another option is they can create their own recycling programs, is what TerraCycle does with many companies. That is an investment in every package that is collected and recycled. They could also shift away from disposable consumption to reusable, like what we do in our loop platform.

And that allows the package to be something that is more clean than refilled, like the proverbial milkman, versus disposed and somehow the material may be recovered. And these are some of the stimuli that the brands can do. Retailers, for example, can edit and choose to only sell things that are better and to eliminate things that are worse. And some retailers have put some aggressive editing in and some don't edit it all.

Lawmakers can make disposable consumption more expensive, ban certain things like banning straws, banning bags, taxing, so on, and can also create incentives. And I think this is the important point, is that all these actors need to try to take all these steps versus all of us pointing the finger in one direction and hoping some change will occur.

## Simon Mainwaring:

Yeah, it is. It's like a circular firing squad right now. Everyone's pointing at each other and so on. And this is probably-

### Tom Szaky:

We need to point inward. We need to-

### Simon Mainwaring:

Yeah, we need to point inward. Absolutely. And it's just part of the thesis of the whole podcast, Lead with We, is that this is multi-stakeholder participation just like democracy in a way. And that we all need to show up and the work we do at We First is always about working with companies to engage all stakeholders to build these brand movements. And let me ask you, I always come back to the human psychology here and I want to drill into what TerraCycle does.

Now you mentioned earlier on that people want the cheapest, fastest, most convenient latte insert product here. Whether it's through journalists and NGOs and others that tension between these different psychological drivers and so on, how do we resolve that fast enough in a sufficient scale to really address the amount of waste we have?

## Tom Szaky:

I think in that spirit of we and pointing inward, because that's the most effective way to do it, I think, is to also understand and accept and empathize, not just understand how each actor moves and what are their motivations. And just accept it as this is how the chess piece moves. For example, consumers tend to want convenience above all else, then they care about features and benefits. And for some, more women than men, sustainability is a feature and a benefit, and then they care about the price. Now I am disappointed by that. I don't think that's awesome.

I wish sustainability was first and convenience was last. But nevertheless, that's how that chess piece moves. Corporations, they're there to serve profit to shareholders. That is their fiduciary responsibility. That sucks. I wish it was serving planet people and profit, just an indicator of health, but that's not how they're set up today and so on and so forth. And we need to go through, and first, understand how the chess pieces move. Because if we're just going to criticize their nature, it's not going to move anything forward.

And then to come up with solutions within that type of landscape, and I think that is going to create the most forward progress. What I'm seeing, unfortunately, quite a bit now is the opposite, is outward finger pointing. Just for example today, the Ellen MacArthur Foundation released a report saying that most major brands are going to fail on their commitments around recyclability, compostability, or reusability by 2025. And when brands were interviewed about this, instead of pointing inward, they said, oh, it's because the government hasn't done this or it's because this industry hasn't done that. And I think that doesn't create movement if we're all pointing outward.

## Simon Mainwaring:

Yeah, completely agree, completely agree. And so tell us about the role of TerraCycle and specifically in this context, what you can and can't recycle. Because I know you take on a lot of issues, whether it's a razor or any other item and really help that enter back into the supply chain.

# Tom Szaky:

Absolutely. We started TerraCycle by, first, saying, can we help that company make that product locally recyclable? That would be more consultative, saying, hey, here's how you can edit your product to be locally recyclable. If that's not possible, then through funding, we can set up recycling programs for just about anything. Because the white elephant in the room is not, can that thing be recycled? It's, who's going to pay the bill?

And so if someone at stakeholder could be a brand or retailer, even an individual or whatever it may be, if they can fund the cost of collecting and processing it, minus whatever we can sell the resulting material for, that can set up and run successful recycling programs for everything, from cigarette butts to razor blades, from dirty diapers to toothbrushes. From there, then our next division is helping companies make those products from waste.

Because it's one thing to say that, okay, something happens with my stuff, but you also have to be a demand engine for recycled content or it's not quite a circle. And then from there, the last step is, well, how do we shift from disposable consumption where the best thing to do is recycle and make from recycled material to reusable so that the package itself for the product becomes a shareable asset? It just gets cleaned and refilled and you get way fewer steps. The other nice thing is reuse systems are closed loop while recycling systems are open loop. It's much tighter of a process to move to reuse.

# Simon Mainwaring:

Right, yeah. And that that means there's a circular economy and it means that there's integrity and transparency and accountability for what goes into the system and what goes out and so on. And we hear all these stories. We all sort out trash in our various bins and whatever degree, some percentage or small percentage of that actually gets recycled. And then you see videos where large trucks are dumping otherwise recycled materials into the ocean and you throw your hands up and go, God, this is madness. What percentage actually does get recycled? And how do you level up that in terms of what you do at TerraCycle?

#### Tom Szaky:

Yeah, very good question. It's very hard to tell what the real percentage is because there is not good global accountability around the numerics of this. No matter what, it's low. Let's be very fair to the issue. And the reason it's low is that the economics of recycling are not robust. And they're not robust because there's not great end markets. Outside all the fluctuations of oil prices and energy prices now, oil has

been historically cheap. And so it's not an easy business, traditionally, to be. Now how can we boost this?

I think the first thing beyond what TerraCycle does is feed the garbage system what it wants, the diet recycling, the garbage system wants, you're feeding it. It's not responsible to do anything with your waste. You have to feed it for it to do the right thing and you need to feed it things that are profitable to recycle, aluminum cans, PET bottles, glass, those things, and less small complex flexible things. That's the first. On the TerraCycle side, we set up what we call effective voluntary product responsibility programs where brands fund or retailers or these things fund these programs and then people can go to our website, join a program, start collecting.

Everything is free in the brand funded programs. And if there isn't a sponsored program, there's always a paid version available. And that is effectively saying, well, if the object can't be designed in the way I described, then at least let's fund the actual cost of collecting and recycling it.

### Simon Mainwaring:

Right. No, that's great. That's a great workaround of necessity. And so I know that there's various ways that companies can collaborate with you. Can you give us a couple of examples that show the flexibility of options? Because there's no one size fits all, depending on large, small, B2B, B2C, who knows?

### Tom Szaky:

Yeah, absolutely. And it can be anything from tiny startups to the biggest multinationals, so many different ways. We do everything from about half a million retailers around the world in-store, have instore collection bids where you can drop off waste there, all the way to mail-in programs that may be good for smaller companies or very distributed brands, all the way to curbside pickup. And that's just on the recycling side.

Then from there, it's about how do we help you make your products from waste, whether it's rock and roll festival waste, all the way to the waste on top of Mount Everest to in the ocean. And then we have to really rethink the supply chain. And this is where I think the ... We're very excited about what we're doing in reuse, which is to say, what if that package ... Because that like a step back. It is the strangest thing. We buy products. And when we buy that coffee, we also buy the coffee cup. But we don't want it the moment there's no coffee inside.

We buy the bag of chips or crisps, but who wants the crisp package, even though it's our property? Why should we own something we don't want to own? And this is, I think, where reuse comes in, but reuse is an entire new infrastructure that has to be created. It's almost equivalent to move from petrol cars to electric cars. It is a whole big leapfrog because we're moving from one way packaging that everything just sort of ... The brand has just make it and get it out the door and then they're done to designing things that they know will come back and have to be reintegrated into their supply chain.

#### Simon Mainwaring:

Yeah. I mean, the nature, the utility of every element in nature and the integrity of the system as a whole of the function of that is something that we are so far away from mimicking, but we need to get there if we're going to leverage the inherent regenerative capacity of nature to actually course correct our future. We're either going to learn one way, the easy way or the hard way.

# Tom Szaky:

And I think the important part is, as we said at the very beginning, nature will develop systems to eat up all our waste but it's going to take 50 to 100 million years to do that.

# Simon Mainwaring:

I don't think we'll be around at that point, right?

# Tom Szaky:

If we're going to progress at the pace we want to progress, which is exponentially faster than evolution and so on, then we have to also create the counterpoints to ourselves. We have to be also the system that then can metabolize everything. Because, I mean, one of the other interesting things about human beings, and I think this has also had come up through the industrial revolution and really became big over the past 100 years, is most animals can only metabolize a few things. I mean, the panda, it's one thing.

But most animals have an incredibly limited diet that they can actually deal with and consume. We, as humans, can consume everything. We can consume the soil, the rock, the wood, let alone what we put in our mouth. I mean, there's not a material on earth we don't somehow know how to consume. And so that these are the key differences in us and everything else. And nature system is not built for the way we behave.

#### Simon Mainwaring:

No, it is fascinating. The question that keeps me up at night, who the hell makes plastic? And also just to double down on that, why have we not, with the same ingenuity, develop something? And I believe there's certain enzymes out there and so on that can break down plastic to its constituent elements and solve the problem much more effectively.

## Tom Szaky:

Yeah, yeah. Well, to answer your first question, it starts with oil. It is extracted by oil companies, and oil doesn't just turn into, say, petrol for the cart, it can be refined into a petrochemical. And that is plastic is a petrochemical, it becomes polymerized, which is just basically a complex compounds. And that makes all these different types of polymers. Polymers are like ... And that our soda bottle is number one plastic or PET or polypropylene or HDPE or high density polyethylene, and so on and so forth. These all come basically oil companies, then chemical companies. You're Exxon to a DowDuPont then to someone who then takes that plastic raw material, makes a product, could be a package or an object that is made by a brand. They stick a logo on it and now it goes to a store.

Simon Mainwaring:

But the-

Tom Szaky:

That seems to be the process of how it comes to life.

# Simon Mainwaring:

But the reason I ask is if you look at the energy sector more broadly, we're looking to alternative technology now, which is walking away from the raw material itself, oil and gas. And you see companies

like Ørsted and Denmark and others, they've made those full transitions. Are we continuing to enable the problem by allowing us to continue to make the product that causes the problem in the first place?

#### Tom Szaky:

Yes, we are. I think there's a couple of pieces. If we're going to move away from fossil fuels, then we go to bio-based plastics, that's just growing plastic out of the ground today versus having it been grown 100 million years ago. It's still generally the same sort of thing. And if we converted all of our plastic to base, you'd need multiple planets of agriculture to produce enough input to fuel our need. We are taking way more who are using way more plastics today than the earth could grow if it had to grow it naturally through bio-based plastic. Again, this all comes down to we have to buy less. Because plastic in itself is not evil. It has made incredible advances in not just the food and packaging, but healthcare and all these different areas.

Simon Mainwaring:

Sure.

# Tom Szaky:

Everything around us is been enabled in some beneficial way by plastic. Then it goes to your second question on, well, what about these end of lives? And it all comes down to economics. Today, the cheapest way to dispose waste is put it in the pile, landfill it, then better, burn it. Oh, sorry, then slightly more expensive, burn it and get some caloric or energy value back. The idea of recycling goes next. And then if you went down into chemical recycling, that's two, three times the price of shredding and melting it. And then if you go into the enzyme type stuff, it's a very specialized, it just gets more and more expensive. And so everything is possible. It's not the issue of the possible, it's the issue of the funding.

## Simon Mainwaring:

No, it's astonishing that somehow we continue to lose sight that some things are more valuable than money and what we're enabling is going to come the cost of our future. And I struggle with that. And I always wonder at what point we're going to reach that, either point of no return where there's a cascading effect after which we can do nothing or we wake up admittedly too late and go, oh, we're sorry, could we start again? And then we go, well, we've got some problems on our hands.

# Tom Szaky:

Yeah. And I think, look, the biggest issue environmentalists will say, not just about the waste crisis, is that we do not pay for our externalities. When we use an object, we do not pay to replant the forests that we exploited. We do not pay to deal with the waste issue. We do not pay for externalities. Corporations are not legally obliged to pay for it. Now the question then comes, okay, why don't they pay for it? And they pick and choose. But if they went too heavy, then their competition will beat them at the price and they have to modulate to some degree.

Because if they said, I'm going to pay for all my externalities, that tube of toothpaste will go from being \$1 to \$10 and no one's going to buy it. And then the people who choose not to will take all the market share and effectively nothing will have happened. And so there's these little movements that happen. They go to wherever they think they're going to get the best benefit, whether that's trying to have a recycling program or have better ingredients or whatever it may be.

But we always hear from corporations, well, if I'm going to invest in my ingredients, I may not be able to invest in recycling. Or if I'm going to invest in recycling, I may not be able to invest over here. They have to make those choices because the playing field does not legally mandate that you have to pay for these externalities.

#### Simon Mainwaring:

Right. Well, there's always going to be that regulatory aspect and that's on the rise risk and compliance around ESG and so on. But I hear you loud and clear there. And coming back to the point about we're all on the hook for this, it's not about waiting for somebody else to do it, but we've all got to show up almost preemptively and then together aggregate up our efforts. The whole idea of selling consumer, inspiring consumers to embrace the concept of reuse or recommerce or the second life of something, how do we make it sexy so that somebody will consciously choose to do that? What is it, a storytelling challenge? Where have you seen it work and why?

#### Tom Szaky:

Yeah. I'm not sure if I'm right, but we believe that it's all about convenience. And convenience means that, and look, to match the gold standard of convenience, that disposability has brought onto the scene. Disposability is crazy easy. You buy it, you use it, you chuck it away. And we need reuse to feel like that. Because in many cases, reuse ideas depend on behavior change. They're like, well, here I'm going to give you a vessel, you're going to clean it at home, you're going to take it to a retailer, you're going to fill it yourself, and so on and so forth.

And behavior change is sometimes synonymous with inconvenience. New things one must do. I think we have to, again, honor disposability for what it's really good at, which is convenience, product range, like all the products I want at a good price. And that's what we need to enable in reuse. Now in, for example, our loop division, what we've tried to do is say, okay, there's no refill stations, nothing. It's all your favorite products. All these big brands from Coca-Cola to Nestle, P&G, you name it, your favorite products just in more durable packages.

And the only new thing is a concept of a deposit that you pay and then you chuck away your packaging like garbage. When you're done, you get your deposit back. But instead of it going to be shredded and melted as recycling, it goes to clean. Now those are a couple of incremental steps, but the more you can reduce those and the more you can make it feel like the behavior we already want to do, I believe it gives the highest chance of success.

#### Simon Mainwaring:

And here's one thing that worries me about engaging with consumers in this way. I sometimes feel personally, and I don't mean to speak on behalf of others, that where you recycle, you feel like you're ticking the do good box and therefore you can go out over here and be excessive about something else. Do you ever feel like recycling and other behaviors that play that role?

#### Tom Szaky:

I'm hopeful. I don't disagree, but I'm hopeful that recycling is more like the gateway into deeper things like switching your diet away, like removing animal protein or living in smaller homes, traveling with airplanes less, and so on and so forth. Well, I don't disagree with what you say. I'm going to try to be much more hopeful that this could be the first step in people thinking about other things that they can

do. Because to your earlier point, it's inevitable that we will balance because the worth always finds balance. It is its nature.

The question I think is not, will it one day balance and everything have a system, these bacteria will emerge 100 million years from now and the planet will be spinning and it will be fine. I think the question is, is it going to be in the short term a very painful experience, not just for us, but for all the other, birds and animals and plants that are on this planet that do not have a voice in this? Or can we somehow be conscious about this and make it a less painful experience?

Right now, unfortunately, we're on the very painful experience path, more environmental trauma, more disaster, more this and that. And inevitably, what's that going to do? It's going to make production much more costly, prices will rise. And as prices rise, consumption will decrease. It will happen. But it'd be nice if it didn't happen in that painful apocalyptic way and much more that we were able to rise above of our animalistic desires and really be on the pedestal because we can somehow rise above that.

# Simon Mainwaring:

And I agree. Not to pile on with the apocalyptic vision, but I want to also be realistic about all these issues. One issue is how we better manage what we buy today and create the circular economy and reuse and recycle and so on. But like carbon, there's a repository of plastic out there and other waste materials that need to be addressed. And the guardian said that by 2050, there'll be more plastic by weight than fish in the ocean, which just does my head in. What do we do about the waste materials that are already out there, whether anything from forever chemicals all the way through to the waste materials?

# Tom Szaky:

Yeah. It's a very big question and I think ... [inaudible 00:34:16], we have to do both things. We have to turn off the tap, which is shift our consumption to things that are reusable, package free, all those things we talked about and modulate downward, and we have to clean up the mess. Now there are different versions of mess. The easiest stuff to clean up first is going to be landfill mining. Once we can make that more eco today, it's not economic because oil is so cheap, new extraction is still so cheap.

If we could make new extraction more expensive, landfill mining will be the first place to look at because everything's at least in one spot. Then as it's more distributed, and the fancy word for this would be informally disposed or littered or something like that, [inaudible 00:34:54] fancy words for just throwing it in the environment, that gets more costly. And the most costly version of that is all the stuff that ends up in our oceans. And I know we project everything to be now in Southeast Asia where it all comes from. But New York City used to dump 100% of its waste into the ocean until the early '80s.

Simon Mainwaring:
Wow.
Tom Szaky:
100%.
Simon Mainwaring:
I mean, it's astonishing. It's astonishing.
Tom Szaky:

[inaudible 00:35:14], out it goes. And so that is incredibly expensive because now it's not just distributed in a horizontal plane, it's distributed also over depth. Because some plastic floats, some ... Sorry, some goes to the top, some is in the middle, and some sinks to the bottom. And all the projects around ocean cleanups that we've done and other great organizations have done are only really addressing the things that are at the very top and still at microscopic percentages relative to what is there and what gets put in every day.

And it comes down to what we've been saying this whole time, there needs to be then the wherewithal to put the money against it. Clean up the mess is crazy expensive. And we have to be aware of that. We're going to have to invest in this at some point.

### Simon Mainwaring:

And to motivate that, coming back to your point, it seems like one of the key drivers is consumer pressure. We talked about companies and consumers, but what about at a community level, this larger we mindset? I mean, I know you do things like zero waste boxes, you do school programs, you do shopping programs. How do you instill this on a broader scale?

# Tom Szaky:

This is why I said I think recycling is a good starting point. I mean, for example, in the United States, 75% of schools run our programs. These free recycling programs do TerraCycle. And what we have found is the first sustainability lesson children learn is reduce, reuse, recycle. That's what we learn in grade one or five years old. And that is not a climate change lesson, it's not a palm oil lesson, it is a recycling waste lesson. Because it's so easy, it's physical. You can touch the garbage and you pick a bin and it's really easy for folks to comprehend.

And we think that's a really great starting point. And the more we can push that early on in young people, then it becomes something that can then move to the next step and the next step and the next step and build into a completely ... Because again, this is going to be a cultural shift, so a different type of culture around how we consume and what we consume.

# Simon Mainwaring:

Right, right. Well, so let me ask you this then. It's very easy for any individual like myself to go, what can one person do? And yet by allowing people to reuse, recycle, and so on, suddenly, you feel like it's manageable because you are playing a tangible role. You feel it physically in your hand, as you say. At the same time, you hear a lot of stories that it's not being effective or it's not enough, not fast enough. How do you provide the transparency and quality control about what you're doing the reporting so people can actually have that trust? Because there's so many messages out there just feels like it's hopeless.

### Tom Szaky:

Yeah, it's absolutely right. I think there's a couple things. I mean, every big thing starts with many little steps. They say this great joke, is how to eat a elephant? It's one bite at a time. That to the individual. But then it's also important on system providers like TerraCycle and others to try to create as much accountability and transparency into how these operations work. From our end, for example, we've, two years ago, started getting independent auditors into our supply chain so we can independently audit what happens and make sure all of that is done in a way that we can all be very, very proud of.

These are all come down to investments as well. We finally just became big enough that we could start affording to do this type of work. And what was so interesting when we started working, and this example with Bureau Veritas, which is a big auditing company to audit us, when we first started talking to them, they surprisingly said to us, this was back maybe three years ago, there are no audit standards that are even available to audit the recycling industry.

Simon Mainwaring:

Wow.

## Tom Szaky:

And that was surprising. We had to work with them for a year to figure out what's the right standard and then we can get through that audit. But it goes to show you that it's almost the opposite, if you will, of the pharmaceutical industry. It is an area that is very much ignored. I always say this metaphor, if you take industry as a human body and you say our immune system is the healthcare industry and you say, I don't know, our brain is the IT industry and you make all these metaphors, what's the garbage industry? It's the part of our body no one wants to look at or see or deal with. And that is a big challenge with waste as we are. It is intrinsically out of sight, out of mind. And this is how the entire industry runs. It's not a bad thing. Again, it is a thing and we have to really lean in and elevate that in a way and do a lot of good work around it.

## Simon Mainwaring:

And then does it come down to nomenclature in the sense that you've had global warming all through way to climate emergency and it's how you frame things to engage people and make it positive? Is storytelling key, the language?

## Tom Szaky:

I think storytelling and language is really important. And right now, unfortunately, if you look at the media out there on recycling, is there's a lot of vilification of the recycling industry. A lot of articles about ... Like Greenpeace just had a thing a week ago about how recycling doesn't work. Just today, there's been a lot of these articles about the Ellen MacArthur Foundation stating that recycling ... People are saying, it's stepping back, if you will. And I think what's critically important is to understand what really allows a recycler to process material. It's the economics, as we were saying. And if our eyes wide open on that, then suddenly things start making so much more sense.

### Simon Mainwaring:

Right. And to move away from the challenges to really lean into what we can achieve when we do it together, give us a sense. Is a zero waste lifestyle possible? And if so, what does that post-waste consumer lifestyle look like, if we had a more mimic nature, shall we say?

# Tom Szaky:

I think it is. It first requires us to buy way less, because that's the first. The easiest thing to do is limit down what we buy, because that will never become waste then. That's the very first thing. Then I think it's a blend of making sure things are recyclable, reusable, without packaging. These are, I think, the three key vectors to look at. And if we limit, then we have less choices to worry about. And within those

choices, we can be more conscious around the choices that we make. Now there's a big white elephant in the room on that.

Limiting is, of course, saves money because you're spending less. But being more conscious is a privilege. It is typically cost for and so on. And we have to be eyes wide open on that because if sustainability is only a luxury of the wealthy, which it is today, loud and clear, then we are not going to be able to get there because the vast majority of this planet is not wealthy. The vast majority of human beings live at the bottom of the pyramid. And this is why it's important to put these out there so that as we think about what are the answers, these stimuli have to be there so that we can really formulate the right solution. Because today, if you enjoy a robust recycling system, you are rich or live in a rich country.

### Simon Mainwaring:

Yeah. And that's a good point. I want to telescope out for a second looking at this from a global perspective. Because if you look at carbon and the climate emergency, there's been a lot of noise around the fact that, for example, certain markets like Brazil and others have said, hey, we want our day in the sun. We've been the lungs of the planet for so long and the global north has enjoyed all these benefits and now we've got to make up for what they did.

In similar ways, people in the global North might say, oh, there are other markets around the world that are creating disproportionate waste because they don't have the resources infrastructure even less so than we do to make a difference. I know that TerraCycle is in North America or it's in some countries in Europe, it's in Australia or so on. What are the global ambitions? And how do you solve for the complexity in all the different markets?

#### Tom Szaky:

Yeah. And our markets match this reality. In the world of waste, there's only two planets. There's the emerging or poor countries and there is the developed or the rich countries. And if you look at the countries we're in, Canada, US, Brazil, Western Europe, Oceania, New Zealand, Australia, Japan, Korea, China, these countries, they're all wealthy. That's where these models work very well. And we struggled very deeply with this. We've been able to open in one, what you would call emerging market, Thailand, but we had to do it as a nonprofit organization, the TerraCycle Foundation.

And it's very difficult to scale foundations. It's harder to track capital and grow them and so on. And it's been a big realization is that there is these two worlds out there and this will create ... It's similar to the concept of how do we clean up our oceans. The reason there's no funding to clean up the oceans is no one owns the oceans. And we are very nationalistic, we're very in our little camp. As we look at this true issue, we will have to zoom out globally and we're going to have to think about how do we release resources to clean up things that we don't view on our side of the fence.

# Simon Mainwaring:

And so when you think of this macro perspective and so on in the waste management industry, what's the biggest obstacle? If you could wave a wand and say like, I saw this one thing we could launch forward, what would that be?

## Tom Szaky:

If I could have a magic wand, I would make it that before an object can come onto the scene, before you and I start our toothpaste brand, we would have to get approval that the waste management system in that country where we want to sell it wants it in their system. And in exchange for that, the waste

management system in that country would be legally responsible that they must then deal with it since they had the right to approve it. Today, neither of those things are true. But isn't that how pharmaceuticals come onto the scene?

# Simon Mainwaring:

Exactly, exactly. And flipping it, what is the thing that gives you the greatest hope in terms of the future of the waste management industry? What do you see in positive terms in 5, 10, 20 years out?

## Tom Szaky:

Yeah, there's a number of things. One is that there is a lot of ... I've been doing this for 20 years. And for 17 years of that 20 years, no one thought of waste was more than just a problem. I mean, no one had thought it was good, but no one ever made a big deal out of it. Starting actually, and it's now maybe four or five years ago, around 2018, the world woke up and got very angry and it's getting angrier and more passionate. And that's really, really important. It's creating a lot of turbulence, mind you. But it is very, very important because it become top of mind.

That is actually quite hopeful, even though it creates short term turbulence. What also makes me hopeful is the answers are there. There's a lot of innovation, there's a lot of answers, and it just requires the desire to fund. Now we're going uphill on that right now because with the global recession, it's going to make it harder in the short term. Because again, waste is not the highest of priorities. It usually is the lowest of priorities after everything else has been addressed.

### Simon Mainwaring:

Tom, I want to say thank you for the insights today, but thank you for the last 20 years of commitment to this space so that now that we're at this point where we are angry, you've taken it to scale and you can help us take that anger and funnel it in a positive way. And please, everyone listening, take it to heart. See your role in this larger movement as very, very meaningful in terms of how you show up, how you live your life. Because there's nothing we can't achieve if we do it together. Thank you so much, Tom.

# Tom Szaky:

Well, thanks for having me. It's been a really wonderful conversation and thank you everyone who's listening.

# Simon Mainwaring:

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