



**PLASTIC**

**GAME**

**CHANGER**

**AMANDA KEETLEY**



# **PLASTIC GAME CHANGER**

How to Reduce Plastic in your Organization to  
Make a Difference to Plastic Pollution

**AMANDA KEETLEY**

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*Registered office*

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# WHAT OTHERS ARE SAYING

“In 2009, when I decided to make a film about the global effects of plastic in the ocean, no one was talking about plastic. Plastic bags were dished out at tills, our toothpaste and cosmetics were full of plastic microbeads, and anyone feeling thirsty when they were out and about would not think twice about buying water delivered in a single-use plastic bottle. What a difference a decade makes! Now the subject is on everyone’s lips; from politicians to the youngest school child; but still, there is confusion, and many people just don’t know how to break their single-use plastic habit. And that’s where this book comes in – now is the time to become a ‘plastic game-changer.’ This book is a powerful call to action and it shows how simple it can be to take responsibility at your workplace. There is no need to wait for legislation to catch up; if you want to make a difference then BE the difference. This book will show you how. Read it and pass it on! And know you are doing your bit for our beautiful oceans.”

**Jo Ruxton**

CEO & Founder of Plastic Oceans UK & Producer of the Film *A Plastic Ocean*

“For years, we have been told we can recycle our way out of the plastic pollution disaster. But now we know the truth; plastic is only ever down-cycled and yet we continue to misuse this indestructible permanent material for so many momentary purposes such as packaging. The only answer is for us to use LESS plastic in the first place. *Plastic Game Changer* provides a forensic and incisive account of what organizations can do to dramatically reduce their plastic consumption. This is the perfect book for anyone crying out for practical steps to wean themselves off a material that touches every aspect of our lives. A brilliant and timely read!”

**Sian Sutherland**

Co-Founder of A Plastic Planet

“Amanda Keetley empowers each of us to embark on a journey to be a Plastic Game Changer and to join together to shift the system from plastic reduction towards a world free of plastic pollution.”

**Dianna Cohen**

CEO & Co-Founder of Plastic Pollution Coalition

“A powerful and practical call to action for employers and employees who want to make a difference when it comes to plastic pollution. Packed with inspirational advice and real-world business examples, *Plastic Game Changer* makes a challenging subject engaging and empowering – whatever your work in the world.”

**Natalie Fee**

Award-winning Campaigner, Founder of City to Sea &  
Author of *How to Save the World for Free*

“Have you dipped your toe in the water of living with less plastic? Doing what you can as an individual but want your actions to ripple further? Then this book is for you. Packed full of ideas, tips, and facts, it’s a step-by-step guide to being a #PlasticGameChanger. This is the book I wish I’d had a decade ago!”

**Michelle Cassar**

Photographer, Filmmaker, Surfer, in her Second Decade of Being #PlasticALotLess  
Author of *Seb and Polly Planet and Their Ocean Quest*

“Amanda Keetley and the Less Plastic team were taking action on this global epidemic long before it became a dinner party topic. Now more relevant than ever, at a time when it is needed more than ever, Amanda’s new book sets out how all of us can be Plastic Game Changers. We’ve all got to join forces on this and the tools, resources, and stories included in here are perfectly placed to inspire, motivate, and activate all of us to get involved, own this issue, and do something meaningful about it. Individuals and businesses, young and old, start-up to corporate; it’s time to get involved and make a difference. This book will guide the way.”

**Martin Gettings CEnv FIEMA**

Head of Sustainability, Canary Wharf Group

“Amanda’s brilliant organization, Less Plastic, is a huge personal inspiration to me as it demonstrates just how important communications are when it comes to addressing environmental emergencies. The global plastic problem is multi-layered and complex – to tell the full, unabridged story in an accessible way requires practical knowledge and deep understanding of the issue. *Plastic Game Changer* showcases her remarkable ability to tell the story and activate that inherent human desire to make a difference.”

**Daniel Webb**

Founder, Everyday Plastic

“If you’ve been wondering what you can do about the plastic pollution crisis, *Plastic Game Changer* is the book to dive into. It provides a really simple format for reducing plastic where you work, plus lots of invaluable advice for overcoming any challenges, so you have all the tools you need to start a positive wave of change in your company. Following on from Amanda’s actionable infographics, this next step is a must-read for anyone who would love to have guidance do something important for the oceans while they are at work, especially among our growing community of B Corporation certified businesses.”

**Matt Hocking**

Founder of Leap. Design for Change, Goodfest Cornwall  
and UK Ambassador for B Corp Movement





To my sons, my nieces and all today's children,  
in the hope that we are capable of making swift,  
wise choices to leave the world in a better state  
for you to inherit tomorrow.

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“We need to respect the oceans and take care  
of them as if our lives depended on it.  
Because they do.”  
Dr. Sylvia Earle

# FOREWORD

I recently had the privilege of sharing a stage with one of the producers of *Blue Planet II*. They gave a dramatic and enthralling account of the incredible marine life that they encountered while creating this seminal documentary. I was captivated by the stories of the charismatic and intelligent sea life, and the new discoveries along the way. However, there was one fact that stuck with me beyond everything else; from the seven hours of broadcasting, just fourteen minutes was dedicated to plastic pollution. And this is what the series is widely recognized for breaking into mainstream public consciousness. It was a turning point for attitudes towards plastics by individuals, industry, and governments. Just fourteen minutes brought into sharp focus the insidious impact of our throwaway lifestyles, the failure of the linear economy, weak government policy and legislation, and the toxic dangers of what was once heralded as the wonder material.

Awareness about plastic pollution is now at an all-time high, and the last two years have seen a continuous stream of news headlines about plastic polluted seas, plastic campaigns, and innovations that could potentially help society reinvent and redefine its relationship with plastic. Awareness is starting to translate into action and impact, with many businesses considering their plastic footprint, consumers calling for a plastic-free revolution and governments around the world teetering on the edge of implementing policy and legislation that could reduce the plastic burden on our planet.

The complex plastic ecosystem and economy will take concerted effort and skill to navigate out of. It is a huge plastic labyrinth, filled with dead ends, cliff faces, sudden drops, barren stretches, and rickety old bridges. But it is also filled with opportunity for us to create a more sustainable world together. We know that business-as-usual is causing the plastic pollution crisis and with plastic production set to double in just the next twenty years, the need for a materials and systems revolution couldn't be more urgent. Business must change the plastic ecosystem that the public is ultimately confined by. This includes redesigning products and creating the new circular systems that mean consumer choices don't come with a built-in impact of polluting the ocean. Consumers need the choice not to cause plastic pollution.

Plastic is only cheap to use because it comes from the hugely subsidized oil industry. One in ten barrels of oil is already used to produce plastic. We must break the hegemony of the oil companies and the tax breaks that keep them in their polluting thrones. Plastic is only cheap because the true cost of its impacts on wildlife and environments are externalized. Plastic is only cheap because its legacy impacts to our health and wellbeing aren't being reconciled. Our fixation on growth is both decimating our natural world and filling it with plastic

pollution that cannot be usefully assimilated by nature. We are currently forfeiting the health of our future world for the convenience of a take-away cappuccino and the profits it creates for the multinational.

We are currently laying down a sedimentary layer of plastic that will be an indelible mark showing the resource profligacy of just a small number of generations. Plastic has been a key vehicle that has exacerbated rampant consumption, directly and indirectly. History will judge this. Just imagine if your loyalty card history or business ledger could come back to haunt you, demonstrating the environmental crimes you committed during this age of plastic.

We cannot allow current awareness to become apathy. Together we must build a movement that demands and delivers the plastic change we want to see. We can all be part of this.

I'm excited about the leadership that we are seeing from some progressive businesses, many accelerating beyond the pace of change governments are suggesting, including those that grace the pages of this constructive and optimistic book. Amanda's experience and insights give straightforward, commonsense advice to empower businesses to take action to bend the plastic pollution curve back in the right direction. Innovation from business can help us all live in a plastic free ecosystem and force governments to do the right thing to reverse plastic emissions.

It's fitting to reflect on climate change at this stage, both issues with the same parent. Big oil. We are seeing the rise of a new movement of radical campaigners from Extinction Rebellion to the Climate Strike movement. This new wave of action is in response to the continuing inaction of governments and big business to decarbonize the economy and curb carbon emissions. Despite the world knowing about climate change for decades and much new technology and innovation to reduce emissions, global increases have continued unabated. Knowingly, we have emitted more carbon than before we knew about climate change. They say that we have a decade left to stop runaway climate change.

Let's not let the plastic graph follow that of carbon over the last 50 years. We need to ensure that the plastic production and pollution graphs become bell curves, peaking then dropping away to sustainable and manageable levels. This will take cross-sectorial efforts, new legislation to drive systemic change, radical business reinvention and bold visions of how we can live our modern lives free of the tyranny of single-use plastic.

Businesses must lead and be rewarded for sustainable innovation and laws must truly protect the environment from plastic pollution, and hold to account those truly responsible. Big societal changes often require strong laws to under-

pin behavior change and environmental protection. Smoking, seatbelts, ozone depletion and stopping sewage pollution in the UK all needed this backstop.

We can all play our part and we can be inspired by the brilliant business examples in this book. Remember, every piece of plastic we pick up from a beach is a victory for the environment; every piece we refuse or avoid is an even bigger victory; but every piece of pointless plastic we prevent from being created is the ultimate goal.

Optimism will be a key ally during this hopeful and exciting time of innovation and revolution on plastic – but we do need to see urgency convert to tangible action. The more we participate in and support the plastic free movement the sooner we will liberate the ocean from the curse of plastic pollution.

Together we are stronger.

**Hugo Tagholm**  
CEO, Surfers Against Sewage  
Cornwall, UK, 30 April 2019





# INTRODUCTION

I was looking at a pair of tiny green islands protruding from the Caribbean Sea. Our guide explained that these were just the tip of two underwater mountains that stretched deep below the surface, creating a sheltered area where all kinds of marine life thrived. I peered down at the shimmering sea. From where I stood, there were no visible clues to betray what lay underneath. But the sun was hot, and the turquoise water was inviting. I was eager to jump in.

We put on our snorkeling gear and tumbled off the side of the boat. As I slipped beneath the surface, I was utterly astounded. It was like entering another world. It was the most beautiful sight I had ever seen.

Vividly patterned tropical fish darted playfully between the rocks, forming a continuously evolving, spectacular display. Sunlight dappled on their luminous scales as they weaved through intricately shaped corals and sponges, and flitted past swaying fronds of seaweed. We watched in awe as an impressive spectrum of colors and shapes unfolded before our eyes, then we duck-dived deeper to swim peacefully alongside the friendly shoals in their strange and wonderful underwater habitat.

That idyllic morning exploring the coral reef became one of the most incredible experiences of my life. All my daily concerns vanished as I absorbed the wonder of the moment. Gazing at those multi-colored fish, an overwhelming feeling of joy washed over me as I saw, with fresh eyes, the interconnectedness of every living thing.

I've always loved the sea and nature, but this experience took it to a new level. Knowing that there are still such magnificent natural places left on our planet, that haven't been entirely ruined by humans yet, has made me more determined than ever to do everything in my power to protect them.

I was lucky not to see any plastic in the sea that day, but that doesn't mean it wasn't there. I had seen plenty of rubbish back on land. The roads and wooded areas that ran alongside those once-perfect beaches were strewn with plastic litter. Without a massive organized clean-up effort, all that mess will eventually end up in the sea.

If we had analyzed water samples from the reef, we would have undoubtedly found microplastics. These tiny toxic plastic pieces have been discovered everywhere scientists have looked; from the depths of the Mariana Trench to the peaks of the Pyrenees and the most remote parts of the Arctic. We don't yet know how dangerous these are to fish and other marine life, and ultimately us.

But we do know they absorb industrial pollutants in the ocean, such as PCBs, which were banned in the 1970s and persist in the marine environment today. We also know that these toxins compound as they move up the food chain.

Many millions of us watched the poignant scenes in *Blue Planet II*, of a grieving pilot whale hugging her dead newborn calf, which she had been carrying around for days, unwilling to let it go. The other whales in her pod appeared to be mourning the loss of the infant too, as they floated supportively alongside her.

In his narration, the iconic conservationist Sir David Attenborough explained that chemicals from industrial and plastic pollution in the ocean build up to lethal levels at the top of the food chain. He thought this calf could have been poisoned by its mother's contaminated milk and warned that unless we significantly reduce the flow of plastics and industrial pollution, marine life will continue to be poisoned for many centuries to come.

The emotive episode, which aired in late 2017 on BBC One, became an instant catalyst, causing many viewers to confront the broader consequences of our throwaway culture for the first time. Dubbed “the Blue Planet effect,” the series catapulted plastic pollution into the public consciousness, as people woke up to the sheer volume of single-use plastic flowing through their lives, and the shocking impact this is having on our oceans.

We don't have to travel to the Caribbean, the Arctic, or the infamous Great Pacific Garbage Patch to see with our own eyes how plastic is polluting our planet. We see evidence any time we go for a walk near our homes or work. We use too much plastic, so it is spilling out into nature at an alarming rate, and because it lasts for hundreds of years, the problem is compounding daily.

When plastic waste gets into the sea, it causes havoc for marine birds and wildlife; entangling, choking or starving them, as it uselessly fills their stomachs, leaving no room for real nutrition. Now we've seen the consequences of our short-term thinking, we need to urgently prioritize the health and welfare of people and planet over speed and convenience. If we are to have any chance of saving the beautiful natural places still left in our world, we must stem the flow of plastic pollution, without delay.

**The only solution is to tackle it at source: turning off the plastic production tap by slashing demand for plastic through learning to live and work with less plastic.**

We are only on this planet for a short time. There's no escaping the fact that the clock is ticking for every one of us. So, let's do something important, something that truly matters with our limited time. Let's leave a more positive legacy for today's children to inherit, rather than a waste-filled world.

In the last episode of the series, Sir David Attenborough urged us to change our ways before it's too late:

“We are at a unique stage in our history. Never before have we had such an awareness of what we are doing to the planet. And never before have we had the power to do something about that.

Surely, we have a responsibility to care for our blue planet. The future of humanity, and indeed all life on Earth, now depends on us.”

\*

I've written this book for change-makers everywhere who feel compelled to do something that makes a difference; by stemming the flow of plastic flooding through our lives and into our oceans.

This book is for:

- Decision-makers within organizations, keen to minimize their negative impact on the environment by reducing the plastic waste they produce.
- Individuals within organizations, requiring resources to convince decision-makers to support a plastic reduction project, and also a practical framework to help them deliver it.
- Anyone who feels compelled to act to protect the beauty and fragility of our oceans and prevent it from further destruction by stemming the flow of plastic waste originating from their organization.

# MY STORY

I started my company, Less Plastic, in 2015 to raise awareness of the issues of ocean plastic and what we can do to tackle it.<sup>1</sup> I distinctly remember the day I first woke up to the extent of the plastic crisis unfolding on our shores. It was soon after we had moved to the south coast of Devon, in the UK, and it was the day after a blustery storm. The wind had subsided, so I went to the beach for an uplifting walk in the rare winter sunshine. But as I stepped onto the sand, instead of the picturesque seascape I was expecting, I found a jumbled heap of plastic-entangled seaweed carpeting the tideline.

On closer inspection, I recognized everyday items that I used in my life. Things I'd never thought twice about buying and throwing away. It was then that it struck me: I was part of the problem. Any of that sandy plastic mess could have been mine. If I chose to use plastic, particularly single-use plastic, in my life, then my plastic waste could end up in the sea too. With those thoughts swirling around my mind, I set to work picking up what I could, although it was impossible to clear it all.

The worst part about cleaning the beach that day was the sinking realization that this was just a minuscule sample of what was out there floating in our oceans. I was shocked because I hadn't even noticed it happening. I hadn't seen plastic insidiously creeping into every corner of my life, eventually destined to spill out into the sea. I made it my mission to find out everything I could about plastic pollution.

I learned that in just a few short decades the magnificent, mysterious, seemingly fathomless wild oceans to which so many of us feel inherently connected, have become plastic-ridden. And this human-made tragedy is having a devastating impact on the countless creatures that live there.

Even when we dispose of it conscientiously, plastic doesn't magically disappear. At best it will go to landfill, or a recycling center where it will be contained and possibly turned into something useful. Although, in reality, this only delays its journey to becoming plastic pollution. Even in countries where we have a functioning waste infrastructure, it can't keep up with the exponential growth in plastic production, so inevitably large volumes of plastic waste overflow into the natural environment, where the final destination will always be the sea.

I realized that plastic pollution is not caused by littering, but by a manufacturing design flaw, because it's simply not logical to choose a material

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1. [www.lessplastic.co.uk](http://www.lessplastic.co.uk)

designed to last forever for a product designed to be used just once. I read about campaigners around the world calling on corporations to be more responsible by shifting to pollution-free products and packaging.

I resolved to use my professional marketing skills to raise awareness of plastic pollution and hoped to inspire others to take action too. I developed a series of infographics to convey the complex issues in an easy-to-understand, easy-to-action way and was overjoyed when the designs went viral on social media. Since then, my social following has grown steadily, and I've used my platforms to share news, tips, and inspiration to help others learn more about the plastic problem and what they can do to tackle it.

Many people believe that one person can't make a difference, which in turn leads to hopeless inaction. But the truth is, individual actions *do* matter because they compound over time, influence the people around you, and are added to the efforts of millions of like-minded individuals all over the world.

My original infographic "9 tips for living with less plastic" focused on how easy it is for us, as individuals, to reduce our personal plastic usage. It has since been translated into more than twenty languages, and the entire range has been used by schools, businesses, community groups and NGOs all over the world to raise awareness of plastic pollution and inspire positive environmental behavior change.

However, despite the importance of individual action, I soon came to realize that action at organizational-level could solve the problem even more quickly. As an employee in an organization, you come into contact with a wide range of colleagues and customers (or teachers and students), and suppliers, partners, and competitors daily. Therefore, if you succeed in persuading even just some of them to use less plastic, then the ripple effect could be game-changing.

I started talking to local business networking groups, schools and community groups about using less plastic and was then invited to speak to some corporations to share my plastic reduction strategies. By summer 2018, I gave up my freelance marketing work to focus on Less Plastic full-time, aiming to spread the messages further among people who could make massive plastic reductions in their professional roles.

I decided to write this book because I wanted to help more people than I could ever hope to meet in person. I developed my "Five Ps to Become a Plastic Game Changer" to help you focus your plastic reduction efforts on the areas that will deliver the most significant impact, allowing you to quickly implement meaningful changes within your organization, to ensure you leave a positive legacy at work, in your community, and on our planet.

This book is not about your personal plastic use, although I will reference some useful resources at the end, including books and websites that have inspired me along the way. There are also lots of free resources on my website, [www.lessplastic.co.uk](http://www.lessplastic.co.uk), designed to help individuals reduce their plastic use.

Instead, this book aims to arm you with everything you need to run a successful plastic reduction project in your organization, whether you are just starting your mission or have already taken significant steps to reduce plastic waste and want to pick up the pace.

My “Plastic Game Changer Five Ps” framework is designed to make the task ahead less overwhelming, taking you through the required steps in a logical way, to enable you to achieve your goals more easily. I’ve also included five real-world Plastic Game Changers from a variety of industries, plus a school, who generously share their experiences, best practice, and insights so you can learn from them, in the hope they will trigger ideas that you can apply to your organization. I’m sure you’ll find their stories invaluable.

My dream is that our throwaway culture will come to an end within a few short years, with the help of people like you making game-changing plastic reductions at organizational-level. My hope is that after reading this book, you will feel compelled to take action in the same way I did, that sad day on the beach surveying the damage our plastic addiction has caused.

You already have the power to start making a positive difference straight away. I hope you choose to use it.

# HOW TO USE THIS BOOK

Of course, you are free to skip ahead to whichever chapters interest you most. However, this is the approach I suggest, to absorb all the necessary information first and then start implementing plastic reductions in your organization as quickly and successfully as possible:

- Read it straight through first.
- Then go back to the section on selecting a guiding team in the “Picture” step, Chapter 12. You will be more effective if you don’t try to accomplish it on your own.
- If you need to convince a decision maker before dedicating people, time and budget to the project, see the “Business Case” and “How to Get Your Boss on Board” in Chapter 11.
- Work through Part Two, prioritizing a few quick wins you can implement to gain some early momentum.
- Use the “Real-World Plastic Game Changer” stories in Chapters 19-23 as inspiration, to “steal” ideas and best practice from different sectors. There’s no need to reinvent the wheel.
- Use the free resources detailed at the end of the book to smooth your journey and avoid the pitfalls.
- See [www.plasticgamechanger.com/resources/](http://www.plasticgamechanger.com/resources/) for more resources and [www.lessplastic.co.uk/infographics/](http://www.lessplastic.co.uk/infographics/) for some useful infographics to convey the key messages.
- You can also share your pledges, insights and your own best practice discoveries on social media, to keep yourself accountable and inspire others to take action too. If you want to let me know what you are up to, tag @LessPlasticUK and use the hashtag #PlasticGameChanger.





## **PART ONE**

# **WHY?**



# CHAPTER 1

## PARADISE LOST

Imagine you're in a small boat, in the middle of the ocean hundreds of miles from land. The water is deep, churning and seemingly bottomless. It's also teeming with life. There's a whole ecosystem thriving underneath you. One that has been evolving for millions of years, perfectly balanced to serve all the species that form part of it.

Weird and wonderful underwater landscapes stretch out beneath you: steep submarine canyons, soaring seamounts, and deep-sea cold-water coral reefs. Each of these strange worlds attracts abundantly diverse creatures that cohabit below the surface; from microscopic zooplankton to shrimp, sea cucumbers, octopuses, turtles, dolphins, whales and every kind of fish imaginable. The ocean is home to an incredible spectrum of biodiversity, much of which remains hidden in the depths, yet to be discovered.

When you pictured yourself on your little boat enjoying the beautiful, wild ocean landscape, did you remember to include an array of multi-colored discarded plastic debris bobbing on the waves in front of you? An accurate snapshot of life at sea today would contain plastic bottles, food wrappers, bags, toothbrushes, cutlery, lighters, flip-flops, and fishing rope; just a small sample of the banal, everyday human waste that makes its way into our magnificent oceans, where it is destined to stay forever.

Even worse than the immediately visible litter are the innumerable smaller plastic fragments, shredded by waves, currents, and sunlight until they are just the right size for a mother bird to feed her young. Mistaking small pieces of brightly colored plastic for fish or squid, she'll stuff her babies' stomachs so full of our synthetic waste that they'll starve to death on their unwholesome plastic diet.

Even if you optimistically pictured a pristine seascape, with not a scrap of marine litter in sight, that view would, in reality, be plastic-tainted too. Samples of seawater would reveal the presence of microplastics (plastic pieces measuring less than the width of a grain of rice) because scientists have found them everywhere they have looked, from Arctic sea ice<sup>2</sup> to deep-sea sediment<sup>3</sup> thousands of meters beneath the surface.

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2 <https://www.theguardian.com/environment/2018/apr/24/record-levels-of-plastic-discovered-in-arctic-sea-ice>

3 <https://www.theguardian.com/environment/2014/dec/17/microplastic-deposits-found-deep-in-worlds-oceans-and-seas>

Simply put, we use too much plastic. And because of its longevity, and because there is no way to get rid of it, our actions are permanently changing the natural world. We welcomed plastic into our lives, but we didn't think things through. Plastic might be convenient in the short term, but its accumulation in our environment is proving to be massively inconvenient in the longer term. More than just an eyesore, it is threatening our planet's finely balanced ecosystems and ultimately threatening human health too.

While it's painful to acknowledge that plastic pollution has contaminated every corner of our amazing blue planet, we must take action to prevent the situation from worsening, by snapping out of our unconscious trance. We still share this world with an abundance of majestic creatures, on land, in the air, and in the sea. When you pause for a moment to appreciate the many wonders of nature, you'll see they're working very hard to survive and thrive despite everything humans throw at them.

Of course, when the scales fall from our eyes, and we see the absurdity of our throwaway culture – which exalts speed, convenience and short-term profit to the detriment of looking after our planet – the realization is deeply depressing. However, feeling hopeless won't address the urgent task of preventing further plastic pollution.

Instead, by taking responsibility for this human-induced crisis through significantly reducing the plastic we use and discard in our daily lives, we will feel better from doing something meaningful to tackle the issue, while adding our positive actions to those of many other like-minded people, so that together we can make a significant difference. Because we've all caused this mess, which means we all have a responsibility to do everything in our power to fix it; by deciding to stop being part of the problem and choosing to become part of the solution.

## CAUSE FOR HOPE

I don't want you to feel discouraged by the state of the world today, because despair leads to inaction. Instead, I want you to see that among the distressing stories, there is genuine cause for hope. Humans have faced and overcome enormous challenges in the past; in fact, we thrive on them. When we put our minds to it, we are capable of amazing things.

“Railway Mania” in Britain led to the laying of an unprecedented 6,220 miles of track, in the years between 1844 and 1846, much of which remains an important part of the total 11,000 miles that currently exist today.<sup>4</sup> The new railway provided a faster, cheaper, more comfortable transport system and

became one of the primary drivers of the industrial revolution. Meanwhile, in the US in 1962, President John F. Kennedy's rousing speech "We choose to go to the moon" launched the Apollo Space Program,<sup>5</sup> which achieved its audacious goal when Neil Armstrong took his first lunar steps, just seven years later in 1969. We must believe we can rise to today's most pressing challenges: operating sustainably within the limits of the natural world. Because the stakes are higher now than ever before.

We can also take heart from how we dealt with the hole in the ozone layer in the mid-1980s. When we discovered that CFCs were causing damage to the protective layer in Earth's atmosphere, the international community acted quickly, binding world governments to reduce and phase out the harmful chemicals. The Montreal Protocol was ratified in 1987, and ultimately 197 countries signed up.<sup>6</sup> As a result of this coherent response, the ozone layer is beginning to restore itself, with projections that it will be fully healed by 2060.<sup>7</sup> The Montreal Protocol has since been dubbed "the world's most successful environmental agreement." Since we managed it before, we can do it again.

Meanwhile, we are only just beginning to understand nature's incredible capacity to heal, regenerate and restore itself, when humans leave it alone. Even in exceptionally polluted cases, nature can bounce back when we let it. An extreme example is the exclusion zone around Chernobyl, in Ukraine. Following the catastrophic nuclear reactor explosion in 1986, a thirty-kilometer area was evacuated, and it became one of the most desolate and polluted places on Earth. Thirty years later, it looks like a nature reserve.<sup>8</sup> Natural ecological processes appear to have restored it, and the region is now home to some of the world's richest biodiversity. Radiation levels remain too high for human habitation and it is unclear whether any of the plants or wildlife are suffering from genetic mutations, but on the surface, nature is thriving because we have left it alone and let it run wild.

In most cases, it's not realistic for us to remove humans entirely from the equation, to restore natural balance; but we will make significant progress when we recognize that nature is an integral part of ourselves that we need to look after, rather than a separate resource we want to exploit. Much as we are in the habit of thinking otherwise, a thriving natural world is fundamental for human health and survival. We would be wise to start reporting the nature-enhancing measures we take on our annual reports, to wean ourselves off our untenable desire for perpetual growth.

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4 <http://www.thebubblebubble.com/railway-mania/>

5 [https://en.wikipedia.org/wiki/We\\_choose\\_to\\_go\\_to\\_the\\_Moon](https://en.wikipedia.org/wiki/We_choose_to_go_to_the_Moon)

6 [https://en.wikipedia.org/wiki/Montreal\\_Protocol](https://en.wikipedia.org/wiki/Montreal_Protocol)

7 <https://www.theguardian.com/environment/2018/nov/05/ozone-layer-healing-after-aerosols-un-northern-hemisphere>

8 <http://www.bbc.com/earth/story/20160421-the-chernobyl-exclusion-zone-is-arguably-a-nature-reserve>

One brilliant way we have helped restore ecosystems in the sea is through the designation of large Marine Protected Areas (MPAs). Studies from around the world have demonstrated that prohibiting fishing, drilling, extracting and dumping provides marine species with vital refuge from harmful human activities, allowing them time and space to recover and re-establish, restoring biodiversity, and bringing benefits to the ocean and beyond. Unfortunately, in 2015 only 4% of the world's oceans were officially protected, and only 0.5% were no-take zones, the gold-standard of marine conservation.<sup>9</sup> We urgently need to expand these crucial conservation zones – called “Hope Spots” by the legendary oceanographer, Sylvia Earle – because as she reminds us, the ocean is our life support system:

“With every drop of water you drink, every breath you take, you're connected to the sea. No matter where on Earth you live. Most of the oxygen in the atmosphere is generated by the sea.”

One of the most encouraging stories featured in the 2016 film, *A Plastic Ocean*, was the restoration of a filthy, biologically dead canal by the Pasig River Rehabilitation Commission, in Manila, in the Philippines, which they achieved by harnessing the power of nature.<sup>10</sup> First, they attempted to clear the rubbish, but the layers of plastic waste went too deep. So instead they laid coconut husks and fresh soil over the plastic waste. Next, they planted vetiver grass, to enhance the quality and strength of the soil, and filter impurities from the soil and water, a practice called phytoremediation. The project also used bioremediation, the use of microbes in mud to clean up contaminated water and soil by secreting enzymes that break down contaminants into smaller, less harmful pieces. Since the introduction of these groundbreaking natural solutions, fish, turtles, and many other species of wildlife have returned to the river. There is a constant battle to keep solid plastic waste out of the river, but the project offers a significant ray of hope: if we humans can change our behavior by stemming the flow of plastic waste, then nature is capable of recovering and restoring balance, especially when we give it a helping hand.

We are still in the very early stages of understanding the extent of the damage we've inflicted on species, ecosystems and food chains with our plastic pollution worldwide. However, it's common sense that nature will have a much better chance of recovering if we turn off the plastic production tap, instead of relying only on clean-up solutions. Simply put, if your kitchen sink was overflowing and water was flooding the floor, you wouldn't tackle it by going straight for the mop; you would turn off the tap first. Likewise, if we only address the plastic crisis by focusing on cleaning up, we will always be cleaning up, and we will barely scrape the surface of the ever-growing mountains of plastic waste.

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9 <https://news.ubc.ca/2015/10/26/only-four-per-cent-of-the-ocean-is-protected-ubc-research/>

10 [https://en.wikipedia.org/wiki/Pasig\\_River\\_Rehabilitation\\_Commission](https://en.wikipedia.org/wiki/Pasig_River_Rehabilitation_Commission)

**The only real solution is to stop plastic production at source.**

I'd love to see the oil and gas industries recognizing the problems their fossil-based products have created and halting plastic production immediately, but I won't hold my breath. I'd love to see governments around the world step up with effective legislation to ban, restrict or tax virgin plastic production, but even if it's on their agenda, their response is too slow.

Which leaves the urgent task of turning off the plastic production tap to the rest of us and this provides yet another cause for hope. Millions of ordinary people around the world care about plastic pollution. Awareness is sky-rocketing, and the issue appeals to people from all sides of the political spectrum. Most people don't like to see a plastic mess in nature, and once they know about the damage plastic causes, most people want to help prevent it from permanently and irreparably polluting our planet.

A large part of our power, as individuals and within our organizations, lies with our purchasing choices. If we vote with our wallet, by only purchasing products that reflect our values, we reduce demand for products we don't like and eventually force suppliers to change, to keep their offering commercially viable. We can speed things up by speaking to suppliers and requesting that they make sustainable changes more quickly, but in the end, the combined choices of many Plastic Game Changers around the world will facilitate the transition to a system that doesn't create plastic waste.

# CHAPTER 2

## A BRIEF HISTORY OF PLASTIC

Imagining today's world without plastic is nearly impossible; but despite the negative impacts of plastic in our environment, not all plastic is bad. Plastic has contributed to economic growth, raising the standard of living for many, facilitated lifesaving advances in modern medicine and made transport more sustainable, by making it lighter and require fewer fossil fuels. Used in the right way, for long-lasting purposes, plastic can offer many economic and environmental benefits.

We hit the sweet spot when we create products from recycled plastic that has been retained inside the circular economy (a system that keeps resources in use as long as possible and minimizes waste), to increase energy and resource efficiencies and prevent plastic from spilling out into the environment. However, sadly today this is the rare exception rather than the rule. Our linear system of make-buy-throwaway has led to rocketing rates of plastic production, resulting in a tidal wave of plastic pollution sweeping into every nook and cranny of our planet.

The first mainstream use of plastic dates back to 1869, when John Wesley Hyatt invented a synthetic polymer in response to a New York firm's offer of \$10,000 for anyone who could provide a substitute for ivory for billiard balls.<sup>11</sup> Billiards had become extremely popular but ivory was the only material found to offer consistent quality for making billiard balls. The cost and effort (not to mention the cruelty) involved in harvesting enough ivory to meet demand resulted in the world's first plastic billiard balls; which was great news for elephants, but heralded the start of the industrial plastic era.

In 1907, the first fully synthetic plastic material (in other words, one that contained no molecules found in nature), was invented by Leo Baekeland to replace shellac, a natural electric insulator, to meet the needs of the rapidly electrifying United States.<sup>12</sup> Called Bakelite, not only was it a good insulator, but it was also durable, heat resistant, and ideally suited for mechanical mass production. It soon became known as "the material of a thousand uses," because it could be shaped or molded into almost anything.

World War II facilitated a swift expansion of the plastics industry; as industrial strength proved to be as critical for victory as military success. The need to preserve scarce natural resources intensified during the war years, so the

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<sup>11</sup> <https://www.sciencehistory.org/the-history-and-future-of-plastics>

<sup>12</sup> <https://en.wikipedia.org/wiki/Bakelite>



production of synthetic alternatives became a priority. In 1935, Wallace Carothers invented a synthetic replacement for Japanese silk, called nylon, which was used for parachutes, ropes, body armor, helmet liners, and numerous other applications during the war.<sup>13</sup> Plexiglas also provided an alternative to glass for aircraft windows. Consequently, during World War II plastic production in the United States jumped by 300%.

The surge in plastic production continued after the war ended. In the 1950s, as an antidote to the Great Depression and the war years, the US government boosted the economy by encouraging consumer spending; and one key way was to advocate replacing reusable things with disposable things. *LIFE Magazine* published a now infamous article in 1955 entitled *Throwaway Living*, heralding a new era of modern living where housewives would be “freed from the drudgery of the past”.<sup>14</sup> It featured a photograph of a family gleefully throwing plates, cups, and cutlery into the air. They declared that it would take forty hours to clean those items, but “no housewife need bother”.

In her book, *Plastic: A Toxic Love Story*, Susan Freinkel reports, “In product after product, market after market, plastics challenged traditional materials and won, taking the place of steel in cars, paper and glass in packaging, and wood in furniture.” Manufacturers were freed from one of the greatest obstacles to industrial-scale production, the limits of nature. They no longer had to travel to the other side of the world in search of diminishing natural resources; they could concoct cheap synthetic substitutes in their on-site labs instead. The possibilities of plastics gave some observers an almost utopian vision of a future of abundant wealth thanks to this inexpensive, wonder material that could be shaped by humans to fulfill their every whim.

Roland Barthes, the twentieth-century French philosopher, was fascinated by plastic, calling it “the stuff of alchemy”. In his 1957, *Mythologies* he portrayed it as an invention that lifted man above nature. It’s interesting to read his thoughts from the perspective of what we know about plastic today:

“The scope of the transformations gives man the measure of his power... the euphoria of prestigious free-wheeling through Nature... The hierarchy of substances is abolished: a single one replaces them all: the whole world can be plasticized.”

Through the 1950s and 1960s, media and advertising campaigns continued to “educate” consumers on the benefits of plastic products, portraying them as attractive and desirable additions to domestic life. Soon plastic toys, polyester clothes and food and drink packaged in disposable plastic were all the rage.

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<sup>13</sup> <https://www.sciencehistory.org/distillations/nylon-a-revolution-in-textiles>

<sup>14</sup> <http://time.com/3879873/throwaway-living-when-tossing-it-all-was-all-the-rage/>

Meanwhile, litter was starting to become a visible problem. In the US, a group of business leaders with links to industries including beer, beer cans, bottles, soft drinks, chewing gum, candy and cigarettes decided to form Keep America Beautiful in 1953, with the declared intention to “break Americans of the habit of tossing litter into streets and out of car windows”.<sup>15</sup> Observers would later suggest their true purpose was to prevent the government from making them responsible for solving the litter problem, by regulating their industries.

On Earth Day 1971, the group launched one of the most effective public awareness campaigns in history. *The Crying Indian* featured the image of a proud Native American looking upon a trashed landscape and then straight into the camera with single tear streaming down his face, while the narrator announced, “people start pollution; people can stop it”. The advert was successful in rallying the public (including many environmentalists) behind the concept that litterers were to blame for plastic pollution, not the corporations that profited from selling their products in disposable packaging. By focusing its attention on cleaning up plastic pollution, the campaign implied that mass production of disposable packaging was socially acceptable and could continue to grow unchecked.

The introduction of the first PET disposable plastic bottle in 1975 facilitated the drinks industry’s switch from refillable glass bottles to single-use plastic bottles.<sup>16</sup> Instead of customers returning reusable glass bottles to the store for a deposit, where bottles were then returned to the bottling plant, washed and refilled, each bottle was simply used once and then discarded. The profit potential of the new disposable model was staggering. Every reusable bottle could be replaced by twenty to forty single-use bottles, consumed and then thrown away permanently, with the cost of packaging and responsibility of disposal passed on to the consumer, and the cost of clean-up ignored. Meanwhile, this new disposable system allowed the industry to achieve massive cost efficiencies by ditching local bottling plants and setting up one-way distribution from central hubs. By the 1980s, almost all refillable soft drinks (and milk) operations had been decommissioned.

During the 1970s and 80s, awareness of the problems caused by plastic waste was growing, but not as quickly as the increase in disposal plastic production. It was the plastics industry that came up with “recycling” as the solution to tackle the growing mountains of plastic waste. The 1980s saw plastic producers lead an influential drive to encourage local councils and municipalities to collect and process recyclable materials as part of their waste management systems.

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<sup>15</sup> <https://www.plasticpollutioncoalition.org/pft/2017/10/26/a-beautiful-if-evil-strategy>

<sup>16</sup> <https://brooklynrail.org/2005/05/express/a-brief-history-of-plastic>

We now know these efforts were entirely ineffective in dealing with the scale of the problem. Only 9% of plastic ever made has been recycled.<sup>17</sup> The rest ends up in landfills or in the environment, and ultimately the oceans.

In 1997, Captain Charles Moore, was on his way home from the Transpacific Yacht Race, crossing from Hawaii to California, when stumbled upon a vast collection of floating rubbish stretching as far as the eye could see. Stunned by the enormity of his discovery, he named it the “Great Pacific Garbage Patch” and it soon became a symbol of the damage that our disposable culture was causing in the oceans.<sup>18</sup> We now know there are five garbage patches, one in each oceanic gyre.<sup>19</sup> Often depicted as a solid island of trash, in reality, each gyre attracts a concentration of plastic debris and microplastics that moves and changes with ocean currents, but stretches from every shoreline, right across each ocean; intensifying daily as plastic production and therefore pollution increases unabated.

Fast forward to 2018, when a global analysis carried out by a group of US academics found that plastic pollution risks near permanent contamination of the natural environment.<sup>20</sup> The report estimated that since the 1950s humans had produced 8.3 billion tonnes<sup>21</sup> of plastic – the equivalent of the weight of one billion elephants – with the majority ending up in landfill or the oceans, where it will stay for hundreds, if not thousands of years.

The project leader, Professor Roland Geyer said:

“We are increasingly smothering ecosystems in plastic and I am very worried that there may be all kinds of unintended, adverse consequences that we will only find out about once it is too late.”

With plastic production projected to increase by 40% over the next decade,<sup>22</sup> the alarm signals have never been louder, calling on each one of us to rise to the challenge and transform our ways before it’s too late.

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17 <https://news.nationalgeographic.com/2017/07/plastic-produced-recycling-waste-ocean-trash-debris-environment/>

18 [https://en.wikipedia.org/wiki/Charles\\_J.\\_Moore](https://en.wikipedia.org/wiki/Charles_J._Moore)

19 <https://www.scienceoc.org/ocean-gyre-project/ocean-gyre-quick-facts/>

20 <https://www.theguardian.com/environment/2017/jul/19/plastic-pollution-risks-near-permanent-contamination-of-natural-environment>

21 Throughout this book I will use tonnes, also known as metric tons. A tonne is a unit of mass equal to 1,000 kilograms.

22 <https://www.globalcitizen.org/en/content/plastic-production-increase-pollution-ocean-waste/>

# CHAPTER 3

## PLASTIC POLLUTION TODAY

One of the reasons that plastic pollution has become one of the greatest environmental threats of our times is because the systems to contain, control, reuse and recycle plastic have been unable to keep pace with the runaway growth in production of throwaway plastic over the last twenty years.

Here are some shocking facts about plastic pollution, highlighting the scale of the problem today and shedding light on where the solutions lie.

- In 2017 global plastic production totaled 348 million tonnes,<sup>23</sup> which is roughly the same as the entire weight of humanity.
- Plastic production is expected to double in the next twenty years if we continue with business-as-usual.<sup>24</sup>
- About 8% of the world's oil production is used to make plastic.<sup>25</sup>
- Fossil fuel companies have invested \$180 billion in expanding plastic production since 2010.<sup>26</sup>
- More than 8 million tonnes of plastic flood our oceans every year, the equivalent of a rubbish truck a minute.<sup>27</sup>
- More than half the world's population does not have access to regular waste collection.<sup>28</sup>
- Only 9% of the plastic produced since the 1950s has been recycled.<sup>29</sup>
- 70% of plastic waste thrown away by the average person in the UK, in 2018, was not recyclable.<sup>30</sup>
- There is already enough plastic in the ocean to circle the earth 425 times.<sup>31</sup>

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23 <https://www.statista.com/statistics/282732/global-production-of-plastics-since-1950/>

24 <https://www.theguardian.com/business/2016/jan/19/more-plastic-than-fish-in-the-sea-by-2050-warns-ellen-macarthur>

25 <https://news.nationalgeographic.com/2018/05/plastics-facts-infographics-ocean-pollution/>

26 <https://www.theguardian.com/environment/2017/dec/26/180bn-investment-in-plastic-factories-feeds-global-packaging-binge>

27 [https://www.ellenmacarthurfoundation.org/assets/downloads/EllenMacArthurFoundation\\_TheNewPlasticsEconomy\\_Pages.pdf](https://www.ellenmacarthurfoundation.org/assets/downloads/EllenMacArthurFoundation_TheNewPlasticsEconomy_Pages.pdf)

28 <http://www.worldbank.org/en/news/feature/2016/03/03/waste-not-want-not---solid-waste-at-the-heart-of-sustainable-development>

29 <https://www.wot.economist.com/only-9-of-the-worlds-plastic-is-recycled/>

30 <https://www.everydayplastic.org/>

31 <https://www.vox.com/2016/5/23/11735856/plastic-ocean>

The statistics reveal that we are recklessly pumping out more plastic than the combined weight of humanity every year, with nowhere for it to go.

Plastic doesn't ever go away, which is why we are seeing mounting evidence of it building up in beautiful, natural places all over the planet, even in the most remote spots. Because plastic is lightweight, it easily blows into rivers and streams, which of course, all eventually lead to the oceans. Once it reaches the ocean, much of it breaks down and is ingested by marine life; a significant amount eventually sinks down to the sea bed; and the rest is transported by ocean currents to land on distant coastlines or is trapped in gyres, forming the so-called "garbage patches."

Many of us in developed countries have grown up with an out-of-sight, out-of-mind attitude to our waste, believing that if we put it in the bin or send it for recycling, we are doing the right thing and there is no need to address our usage. But, imagine if you could see all the waste you've thrown away in your life. Imagine that someone didn't come and collect it for you every week. Imagine it was building up outside your front door or in your back garden, and you had to confront it daily (in fact, this is a reality for 50% of the world's population).

We can't continue with this illusion that we can just send our rubbish away with no consequences. The whole world is our back garden and the more rubbish we use and throw away, the more it is coming back to haunt us as the visual eyesore of plastic pollution and the latest new poisonous additive to our food.

## SINGLE-USE PLASTIC

Estimates suggest that almost half of the plastic produced today is for single-use purposes, useful for an average of eleven minutes before being discarded, then destined to last for centuries. As the Greenpeace short video, *The Story of a Spoon* illustrates better than words; the energy, water, and people required to mine the materials, then manufacture and distribute single-use plastic products add up to a monumental misuse of resources.<sup>32</sup> And that's before you even take into account the waste legacy. Single-use plastic is destined to outlive us all, and our descendants.

Unfortunately, recycling has had minimal impact on the plastic problem to date. I'll talk more about this in the next chapter. As highlighted in the statistics earlier, only 9% of plastic ever produced has been recycled, demonstrating that it's not an effective solution to the scale of the plastic problem we face.

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<sup>32</sup> <https://www.youtube.com/watch?v=qg-E1FjjaxY>

There is scope for recycling to be reformed and transformed so that waste becomes a valuable resource and none is allowed to escape into the environment or landfill. But this will take investment, innovation and time and therefore should not be the main option we bank on to resolve our plastic crisis. The most urgent requirement is to shrink demand for virgin plastic so that we turn off the plastic production tap.

While it would, in theory, be quicker for global governments to come together to collectively ban single-use plastic (in the same way they collaborated to ban CFCs in Montreal in 1987); vested interests and domestic politics often obstruct effective legislation. Due to the forecast exponential growth of plastic production – primarily driven by single-use products and packaging – we don't have time to wait for agreements. The next quickest route is for companies and organizations, who use large quantities of plastic as part of their business processes, to voluntarily shift their culture to become more sustainable and less polluting and spark a ripple effect of change within their industries.

Because the fact is, now we know how inappropriate it is to use an indestructible material for disposable purposes, it would be irresponsible and unethical to continue business-as-usual. This is not about blame for previous actions. It's about stepping up to do the right thing now to fix the problem; by investing time, talent and money into transforming systems from a wasteful linear model toward a sustainable circular one. It's about prioritizing refuse, reduce and reuse in that order; and in cases where none of those options are achievable, then turning to properly managed closed-loop recycling or composting systems to repurpose any waste materials into new useful products or nutrient-rich compost; resulting in zero to landfill or incineration and zero pollution.

## MICROPLASTICS

In 2004, Professor Richard Thompson OBE published a seminal report that highlighted the presence of microplastics in our oceans.<sup>33</sup> In his work as a professor of Marine Biology at Plymouth University in the UK, he had noticed that marine plastic debris was not accumulating as rapidly as he expected, and in fact, seemed to be disappearing. Through his research, he discovered that rather than going away, plastic in the ocean was breaking down into billions of microscopic pieces. He was the first to coin the term “microplastics.”

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33 <http://science.sciencemag.org/content/304/5672/838>

Today, microplastics are known to come from several sources. Primary microplastics include nurdles (small plastic pellets shipped around the world for manufacturing and easily lost during transportation), microbeads (tiny plastic beads found in some cosmetics and cleaning products), and microfibers (threads from synthetic clothes shed during laundry). Secondary microplastics refer to larger plastic debris that has broken down into microscopic particles in the sea.

Despite their tiny size, microplastics pose the most significant risk to human health because they are known to attract other ocean pollutants (such as PCBs and DDEs), which are known to bio-accumulate as they rise through the food chain, causing increased toxicity for the mammals at the top.

We are only just beginning to discover what the implications will be for human health. Scientists have discovered microplastics everywhere they have looked, including in soil, food, air, drinking water (bottled and tap), and even in human poo!<sup>34</sup> The consensus is that microplastics are already “absolutely everywhere”<sup>35</sup> and humans are ingesting them, and excreting at least some of them.

However, more research is urgently needed to discover the potential long-term human health impacts. Chemicals in plastic are known to mimic estrogen and cause hormone imbalances which can lead to lower sperm counts and some cancers.<sup>36</sup> But this is likely to be just the tip of the iceberg. Plastic has the potential to be the next big human health disaster. Common sense tells us that we should not wait to find out. We need to act urgently to limit further pollution of our environment, to protect the health of nature and ourselves.

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34 <https://www.theguardian.com/environment/2018/oct/22/microplastics-found-in-human-stools-for-the-first-time>

35 <https://www.theguardian.com/environment/2019/mar/07/microplastic-pollution-revealed-absolutely-everywhere-by-new-research>

36 <https://www.breastcanceruk.org.uk/reduce-your-risk/protect-your-family/>

# CHAPTER 4

## LIMITATIONS OF RECYCLING

In an eye-opening experiment in 2017, Daniel Webb, a thirty-six-year-old self-described “average bloke” from Margate in Kent, decided to collect every piece of plastic he used and would otherwise have thrown away, during an entire year. His project, Everyday Plastic, helped him to visually confront his plastic footprint and understand how much single-use plastic the average person in the UK throws away in a year.<sup>37</sup>

At the end of the year, with the help of the Earth scientist, Dr. Julie Schneider, he categorized the various plastic types to discover the scale of the problem when applied to the whole of the UK population. Daniel had thrown away 4,490 pieces of plastic during the year; an average of twelve pieces a day. At UK population-level this equates to 295 billion pieces of plastic in a year, which can be visualized as a pile of rubbish big enough to cover Clapham Common (1,074 meters diameter), one of London’s largest green spaces and rise as high as the Shard (306 meters high), the UK’s tallest building.

Shockingly, yet unsurprisingly, 93% of Daniel’s plastic waste came from single-use plastic packaging, designed specifically to be used once and then thrown away.

Only 10% of Daniel’s waste would be collected for recycling, with a mere 4% destined to be recycled in UK facilities. The rest would be incinerated or exported to South East Asia, a region that lacks a proper infrastructure for dealing with our waste.

Only 1.3% of the entire collection of throwaway plastic waste was made from recycled plastic. The rest was produced from brand new virgin plastic, used once and then thrown away, which is very lucrative for the oil and gas industry but not so good for the rest of us.

Daniel’s experiment confirmed what many of us have already started realizing. Our recycling systems are broken. Only a tiny fraction of plastic is genuinely recycled, and even when that happens, most of could be more accurately described as “down-cycled.” Which is to say that a plastic bottle sent to recycling (if indeed it truly is recycled) is more likely to become a fleece or a park bench, and rarely becomes another plastic bottle.

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<sup>37</sup> <https://www.everydayplastic.org/>



Until the start of 2018, much of the plastic recycling originating from the US, UK and Europe was sent to China. However, the quality of that mixed plastic waste was so poor that China banned plastic recycling exports at the start of 2018. Sky Ocean Rescue recently uncovered that most of our exported recycling is not being recycled at all,<sup>38</sup> and is instead stockpiling in illegal dumps in countries like Malaysia, Thailand, and Vietnam.<sup>39</sup> These countries are all ill-equipped to deal with our plastic waste, leading to vast plastic mountains springing up at their ports, most likely to eventually end up in the sea.

As I was completing this book, news broke of the Filipino President, Rodrigo Duterte, threatening to “declare war” if Canada did not accept back seventy-two containers of waste dating back to 2013 and 2014 that had been incorrectly labelled as recycling. Later, a spokesman clarified that it had been just a figure of speech to underline how upset he was, but it seems to have worked. At time of writing, Canada is due to take back the waste to deal with themselves.<sup>40</sup>

This story highlights several flaws in our current system. Firstly, the corruption present in the waste import and export trade, where there are unscrupulous dealers who care more about quick profit than responsibly dealing with the waste. Canada maintains that the Filipino import company was to blame for the fiasco. Secondly, Canada is not alone in this. It’s entirely unethical for any developed country to pay developing countries to take their waste off their hands; taking advantage of their need for cash while ignoring the lack of adequate waste infrastructures. Thirdly, the risk to other developed countries that other developing countries may now decide to send their historic waste back too. I wouldn’t blame them either. Finally, the shortsightedness of the whole system that produces vast volumes of single-use products and packaging with no forethought about what will happen to them after their short spell of usefulness; and who will pay to deal with these enormous mountains of waste. Ultimately it will be all of us.

All this goes to show that with so little plastic being genuinely recycled, as responsible individuals and employees in our organizations, we must focus our efforts on **producing less plastic in the first place.**

You can minimize your organization’s contribution to the plastic crisis by challenging the status quo; making responsible decisions when choosing which materials to use for products and packaging, and designing things that don’t get thrown away. When it comes to plastic, refusing, reducing and reusing are always better than recycling.

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38 <https://news.sky.com/story/thousands-of-tons-of-uk-plastic-dumped-across-world-11218595>

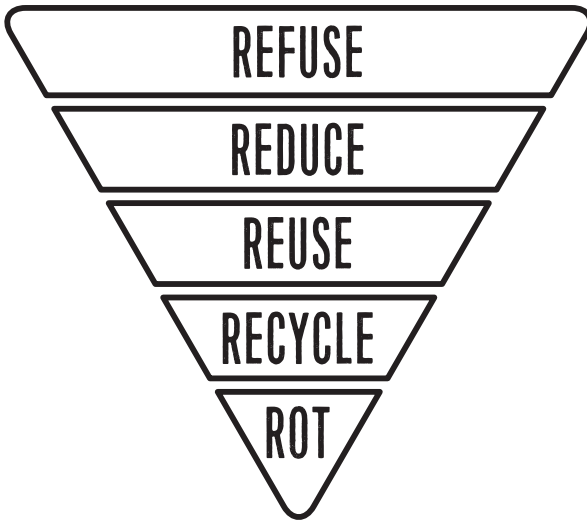
39 <https://www.telegraph.co.uk/news/2018/10/21/recycled-uk-plastic-found-dumped-malaysian-sites/>

40 <https://nationalpost.com/news/world/the-great-canada-philippines-diplomatic-garbage-dispute-of-2019-seems-almost-over>

# A REMINDER OF THE WASTE HIERARCHY

We all remember the mantra “reduce, reuse, recycle” but somewhere along the way we got stuck on “recycle” and thought it could solve all our waste challenges.

More up-to-date versions show waste prevention at the start, with “refuse,” and then continue to underline that recycling is one of the last choices. When recycling does happen, it should be properly managed, closed-loop recycling that keeps valuable resources in the circular economy and out of our environment.



When you set to work eliminating single-use plastic from your organization, I urge you to prioritize REFUSE, REDUCE and REUSE in your search for alternatives. These solutions will very often save you money as well as being more sustainable.

If you do need to opt for RECYCLE, please take every step you can to ensure that your products and packaging can genuinely be recycled ideally in the country of origin, to avoid shipping unwanted waste to another country.

ROT refers to waste as nature intended, able to naturally break down and return to the soil while adding beneficial nutrients rather than harmful pollution. This is at the bottom of the triangle as most waste that we produce (apart from food waste) does not rot naturally. Certified compostable waste has the potential to offer this option, but should be used with caution, as I'll explain in Chapter 6, due to widespread lack of understanding about the specific conditions required for it to break down safely, without harming nature in the process.

You can play a key part in transforming the system for the better. Start by acknowledging the many flaws of the current buy-make-throwaway model (see the recommended books in the resources if you'd like to learn more).

Then consciously decide to stop being a part of it. Pollution is a design choice.<sup>41</sup> You can avoid it by eliminating single-use products and packaging from your processes, while creating demand for more responsible, ethical, closed-loop recycling systems that deal with waste locally.

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<sup>41</sup> This phrase was first coined by The Two Hands Project: <https://www.facebook.com/watch/?v=215811722249048>

# CHAPTER 5

## PROBLEMS WITH INCINERATION

Incineration is often touted as a solution when talking about recycling and the circular economy. I don't share the view that burning plastic waste to generate energy is a good use of resources.

If we choose to invest in building incinerators to meet our power needs (instead of investing in renewable energy), we are encouraging even more production of single-use plastic to “feed” them, much of which will inevitably escape into our environment, as it currently does, because nothing will have changed.

The root cause of our plastic crisis is that we produce mind-boggling quantities of plastic every year. The only way to effectively stop plastic pollution worsening is to turn off the plastic production tap, not to legitimize it to keep flowing.

Choosing to build more incinerators to address our waste needs is also counterproductive because incineration disincentivizes people to care about their consumption, which is very dangerous in a world where over seven billion people need to learn to live within the constraints of our finite planetary resources. Because if everyone adopted the average American lifestyle, we would need over four Earths to sustain it.<sup>42</sup>

Despite attempts by the incineration industry to depict it otherwise, the waste that feeds incinerators is not “renewable;” it consists of paper, plastic, aluminum, etc., all finite resources. Incinerators form part of the outdated linear model: “extract-make-buy-use-throwaway.” They then add “burn” to the end of that process. Then we have to go back to extract more raw materials to start all over again.

Every time a decision is made to build an incinerator, they set back the real solutions by twenty-five years, the time it takes to pay back the massive investment involved.<sup>43</sup> If the investment was instead channeled into transforming the recycling infrastructure, ensuring valuable materials were kept inside the economic loop and not allowed to escape, along with composting, three to four times more energy than an incinerator can produce would be saved.<sup>44</sup>

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42 <https://www.sciencealert.com/here-s-how-the-american-lifestyle-really-compares-to-the-rest-of-the-world>

43 <http://www.no-burn.org/why-incineration-is-a-very-bad-idea-in-the-twenty-first-century/>

44 <https://zerowasteeurope.eu/2017/10/deliver-pay-waste-incineration-causes-recycling-slow/>

The popularity of incinerators in recent years has slowed progress within the recycling industry and prevented enhancements to facilitate a shift towards a truly circular economy. Due to the heavy investments local governments have made in their incinerators, they have less money to invest in recycling. Also, because incinerators take mixed waste, there is less incentive to sort and segregate waste in a way that would lead to improved recycling.

Another reason to avoid investing in incinerators is that they siphon money out of local economies, onto the bottom line of the multinational corporations that build and run them. Huge capital is required to pay for the expensive technology and air pollution control, yet they create very few local jobs. Conversely, alternative waste management solutions such as recycling and composting, create local jobs and local businesses, benefiting the local community instead of corporations.

There are also questions over the efficiency of the filters that “scrub” the air before letting it release with claims of harmful air pollution emissions going unreported<sup>45</sup> and questions over the safety of toxic ash and what to do with it.<sup>46</sup> Ash left behind from the incineration process is considerable; 10% of the volume of the input, and 30% of its weight.

Meanwhile, the technology involved in incineration does not always run smoothly. In Copenhagen, despite substantial investment in their “state of the art” Amager Bakke Plant, an unexpected breakdown led to mountains of waste piling up.<sup>47</sup> Even when it is working properly, it creates problems. The plant’s processing capacity is 400,000 tonnes of waste per year, which is far too high to maintain and will mean they rely on waste imports. However, if the anticipated, and much-needed, worldwide improvements in resource management and circular recycling come to fruition the plant will operate under capacity and at a loss, with local taxpayers ultimately having to foot the bill.

It seems the only beneficiaries of incineration are the companies that build the incinerators and the fossil fuel companies who want to have license to continue to pump out ever-increasing quantities of single-use plastic, at a time when we know we must categorically stop using fossil fuels.

Around 8% of the world’s oil production is used to make plastic today,<sup>48</sup> but in light of the fact that fossil fuel companies have invested \$180 billion in expanding plastic production since 2010 (see Chapter 3), we are unlikely to see them voluntarily slowing production.

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45 <https://ciwm-journal.co.uk/harmful-incinerator-emissions-going-unreported-report-claims/>

46 [https://friendsoftheearth.uk/sites/default/files/downloads/safety\\_incinerator\\_ash.pdf](https://friendsoftheearth.uk/sites/default/files/downloads/safety_incinerator_ash.pdf)

47 <https://zerowasteurope.eu/2017/10/copenhagen-goes-all-in-on-incineration-and-its-a-costly-mistake/>

48 <https://news.nationalgeographic.com/2018/05/plastics-facts-infographics-ocean-pollution/>

The onus to halt plastic production falls on all of us. We can achieve it by focusing our efforts on reducing demand for plastic. Incineration will not help us achieve this because it perpetuates the unsustainable linear economy, while contributing to the climate crisis.

# CHAPTER 6

## WHAT ABOUT BIOPLASTICS, BIODEGRADABLE & COMPOSTABLE PLASTICS?

There is a lot of confusion around different types of plant-based, biodegradable or compostable plastic and how eco-friendly they really are. This chapter aims to shed light on the distinctions between the different types of “eco-friendly” plastic and guide you toward the best decision, for your organization and for preventing further pollution.

In a nutshell, most types of plastic will *not* break down safely if they end up in the sea, or discarded as litter anywhere in nature, because they need specific conditions to decompose.

Knowing what a particular type of plastic has been made from will determine how best to get rid of it at the end of its useful life. For example, plastic derived from plant materials cannot be added to conventional fossil-based plastic recycling streams. So, while it might appear to be the most eco-friendly option at first glance because it doesn't involve extracting more oil, it might still become waste that we find difficult to get rid of at its end of life.

Let's dig into the detail...

### BIOPLASTICS

Bioplastics are made from plant or other biological material instead of petroleum. They are often made from corn starch or sugarcane. Advocates argue that if a bioplastic item releases carbon once discarded, as it degrades, it will add less carbon to the atmosphere than conventional plastic because it's simply returning the carbon the plants removed while growing, instead of releasing carbon previously trapped underground in the form of oil. Opponents say that argument doesn't take into account the question of whether it's ethical to use land, energy, and water to grow a crop that is not destined for human nourishment in a food-scarce world. Particularly if it is being used for a single-use product.

At end-of-life, some bioplastics are able to be composted in high heat industrial composting facilities but others are not; it depends which material has been used to make it. Some are able to be recycled but most are not. The rest will go to landfill. The confusion surrounding what to do with bioplastics once their usefulness has come to an end is their biggest drawback.

If bioplastics escape into the environment, a common misconception is that they will break down naturally and harmlessly. Unfortunately this is not the case. All bioplastics currently available behave just like conventional plastic in nature and are equally as capable of causing harm in the marine environment.

Without adequate industrial composting facilities and widespread education on how to safely dispose of them, any push toward using bioplastics could be construed as greenwashing.

## **BIODEGRADABLE VS COMPOSTABLE PLASTICS**

Whether plastic is non-biodegradable, biodegradable or compostable will determine how it can be safely disposed at end-of-life.

It's imperative that we educate ourselves and those around us on these matters, however complex they may seem at first glance. I have tried to simplify the key points below and finish up with a few useful questions to ask when considering a material, to see if it really meets your criteria.

## **NON-BIODEGRADABLE PLASTICS**

Conventional fossil-based plastic is non-biodegradable and is best disposed of in recycling (if possible) or landfill. Surprisingly, many bioplastics are also non-biodegradable which causes additional confusion when trying to make the appropriate choice.

## **BIODEGRADABLE PLASTICS**

Biodegradable plastics have additives that allow them to break down faster; however, this does not mean they should be freely released into the environment because the speed and nature of biodegradation differs between materials and environmental conditions. "Biodegradable" should really be an obsolete term as there is no time requirement for the biodegradation of biodegradable plastic, nor is there any requirement for avoiding harmful residues. Many biodegradable plastics also leave behind toxic microplastics, so despite marketing to the contrary, they are not a green solution.



In 2016, the UN's top environmental scientist warned that biodegradable plastic offered a "false solution for the ocean waste problem," because once they reach the ocean they are unable to break down and therefore continue to harm marine life and ecosystems.<sup>49</sup>

Another issue with both biodegradable and compostable plastics is that additives prevent it from being successfully recycled alongside conventional plastic, so it prevents a full transition to a circular economy, where we keep valuable resources in the system. Instead new resources continuously need to be extracted or grown to make new biodegradable or compostable plastic. Meanwhile, difficulty visually distinguishing between biodegradable or compostable plastic causes problems for the recycling industry.

Oxo-degradable plastics have been pinpointed as one of the least environmentally-friendly options available and many organizations are calling for a worldwide ban. In 2017, a statement from the Ellen MacArthur Foundation's New Plastics Economy said:

"The available evidence overwhelmingly suggests oxo-degradable plastics do not achieve what their producers claim and instead contribute to microplastic pollution. In addition, these materials are not suited for effective long-term reuse, recycling at scale or composting, meaning they cannot be part of a circular economy."

## COMPOSTABLE PLASTICS

Compostable plastics are defined as such because they are required to meet criteria (EN13432 or equivalent) that ensures they will safely decompose within a specific time frame, usually three to six months, in industrial composting conditions. Some compostable plastics can also decompose successfully in home composting conditions (typically cooler and less efficient than industrial compost facilities).

Switching to compostable plastic as a knee-jerk replacement to traditional single-use plastic products and packaging is not always the perfect solution it first seems. Firstly, it doesn't address our throwaway culture, and the investment of energy and resources required to grow, manufacture and distribute a material that is still intended to be used for fleeting single-use purposes. Secondly, most compostable plastic is not safe if it escapes into the environment or ocean. Nor can it be added to conventional plastic recycling streams. Meanwhile, if it ends up in landfill it will release methane, a powerful greenhouse gas, as it biodegrades.

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<sup>49</sup> <https://www.theguardian.com/environment/2016/may/23/biodegradable-plastic-false-solution-for-ocean-waste-problem>

However, potentially the biggest drawback of biodegradable and compostable plastic is that it can lead to an increase in littering as customers misunderstand the capabilities of the materials, which means more of it ultimately ends up in the sea.

Even if a material is proven to decompose in the ocean in a relatively short period of time of six to twelve months (compared to 400+ years for conventional plastic) it still has the capacity to harm plenty of marine life during this time. And we have no knowledge of the consequences for any fish that eat its chemical components, and the impact on the food chain.

**When looking for the best long-term solution to prevent plastic pollution, refusing, reducing or reusing (in that order) will always be the best option.**

Unfortunately, many switches to compostable plastic, although well-intentioned, stem from the desire to find a quick-fix solution, without thinking through whether it will really end up composted. If they can't be sure, then it doesn't solve the problem.

Despite the drawbacks listed above, if you know the facts, compostable plastic does present the opportunity for “zero waste” disposables. As long as you:

1. educate your customers on where to dispose of it
2. provide compost collection bins
3. ensure the compostable plastic waste reaches high heat compost facilities.

The above requirements are likely to be more realistic for closely managed and closed-loop systems such as festivals, events, schools, campus colleges, office blocks and small communities. Or for businesses such as veg box delivery services, where customers could be educated to compost the packaging with their vegetable peels, or can send it back to be composted at the farm.

Riverford is a great example of a business leading the way in refusing, reducing and reusing their packaging where possible, and switching to compostable plastic where necessary, coupled with customer education.<sup>50</sup>

So what's my verdict? I recommend prioritizing refusing, reducing or reusing plastic in your products and packaging wherever possible, rather than swapping one single-use item for another. I advocate not switching from single-use plastic to single-use paper and cardboard, unless it is unavoidable and in which case ensure it is certified FSC recycled. We need as many trees as possible to help us overcome our environmental challenges, which is why emerging innovation to repurpose agricultural by-products into packaging is very exciting.

Of course we would also need to see legislation from governments to require proper labelling, consumer education campaigns, and a mass overhaul of existing waste collection services to enable compostable products and packaging to really fulfil their green potential.

## WATCH THIS SPACE

There are certain to be many more innovations over the coming years to address the need for cheap, useful packaging solutions that are marine degradable and don't put too much pressure on our land and our food production system, or lead to deforestation.

Some promising examples include a mushroom-based packaging designed to replace polystyrene, from US-based Ecovative Design;<sup>51</sup> dissolvable, nutrient-rich seaweed packaging for food wrappers and sachets from Indonesian start-up Evoware;<sup>52</sup> and the recent discovery by Israeli scientists that they can produce bioplastics from organisms that feed on seaweed, negating the need for land and fresh water in their production process.<sup>53</sup>

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50 <https://www.riverford.co.uk/tot/thoughtful-packaging>

51 <https://ecovative.com/>

52 <https://newplasticseconomy.org/innovation-prize/winners/evoware>

53 <https://www.biobasedworldnews.com/israeli-scientists-produce-bio-plastics-from-microorganisms-that-feed-on-seaweed>

# CHAPTER 7

## IMAGINE BETTER

If you were to take a moment to look at your workplace with eyes trained to pick out all the pointless plastic, what would you see? Colleagues rushing from one meeting to the next clutching disposable coffee cups and single-use plastic water bottles? Products encased in excessive plastic packaging? Wasteful marketing and promotional materials stacked up in a corner? Supplier deliveries swamped in unnecessary plastic wrap that goes straight in the bin? Could you even take a guess at how much plastic waste is generated by business-as-usual at your workplace?

Was that a depressing exercise? Do you need a more positive vision of how things could look with less plastic?

Imagine plumbed-in filtered tap water dispensers, with reusable glasses available and colleagues carrying their own reusable water bottles to hydrate on the go. An office kitchen or canteen with washable, reusable mugs, glasses, crockery, and cutlery; perhaps with a simple deposit system to encourage employees who take food and drink to their desks to return their reusables afterward. Visualize suppliers who are on-board with your quest to reduce plastic pollution, ensuring your organization's deliveries arrive in reusable and returnable packaging or 100% recycled and recyclable packaging, resulting in zero to landfill (which incidentally will significantly cut your business waste costs too).

Picture customers choosing to buy from your organization because of its reputation for taking responsibility for the waste it generates, appreciating your leadership and innovation when it comes to delivering goods and services with minimal plastic waste.

See your colleagues organizing regular park, street or beach cleans or plogging (picking up plastic while jogging); for the benefits of fresh air and exercise, team bonding, and giving back to your community and to nature. Meanwhile, your company attracts and retains the very best employees because they want to work for a responsible organization that minimizes its plastic footprint.

And last but not least, look at *you*, feeling a deep sense of pride in where you work because of your organization's stance on addressing global plastic pollution by significantly reducing the plastic waste it generates, and the role you played in making this happen.

When you take a moment to envisage it, this vision isn't that far-fetched. While it might feel a long way from where you are right now, many organizations are already enjoying the benefits of having made the decision to radically reduce the plastic used and thrown away as part of their business operations. There's nothing to stop your organization joining their ranks.

# CHAPTER 8

## LESSONS FROM THE PAST

Are you finding it hard to imagine your organization shifting from where it is now, to becoming close to plastic-free? Take heart from many occasions in history, when things seemed impossible, impractical or unrealistic, because they went against the grain of current culture, but are now completely normal and accepted. Here are just a few examples...

Not so long ago, it seemed that everyone smoked, everywhere. On planes, on buses, in pubs, clubs, and restaurants and at work. In 1974, 50% of men and 40% of women smoked cigarettes. Today, only 16.9% of the UK adult population smokes cigarettes. The dramatic decline is attributed to a combination of tough measures including price rises, plain packaging and educational campaigns urging people to quit, as well as the introduction of the smoke-free law in 2007, which made it illegal to smoke in public, enclosed spaces, making smoking more difficult and less appealing.

Today, most of us put on our seatbelts every time we get in a car without even thinking about it, but it only became law to wear a seatbelt in the UK as recently as 1983 (front seat) and 1989 (back seat). Before then, wearing seatbelts was not the norm and there were even several groups campaigning against wearing seatbelts as they felt it encroached on their personal freedom. Thanks to educational campaigns and legislation, we now know that they save lives and most of us strap in on autopilot.

We can draw from these stories that while our throwaway culture seems ingrained and insurmountable from our current viewpoint, things are never set in stone. Our culture is constantly evolving. Emerging knowledge and increasing awareness of the harm plastic overuse causes to nature and to human health will lead to a rapid transformation in the way we do things. Organizations have a key role to play in making this happen, because they have historically contributed to much of the problem and because they are in a position to make a significant difference now, by changing how they do things.

You might ask what role governments have to play in facilitating the cultural shift? While governments could (and hopefully will) enable great leaps forward with legislation to restrict plastic production, their short-term four- to five-year political agendas mean they too often fail to take quick, bold action to address

long-term issues. They have so far missed timely opportunities to ban or tax single-use plastic (the most effective solution to the problem). This may be due to the distraction of national politics, ineptitude, or pressure from lobbying groups with vested interests; such as the soft drinks corporations that have tried to block the roll-out of a plastic bottle deposit return scheme in England.<sup>54</sup>

There is a growing movement of individuals making every effort to reduce the plastic they buy and use in their daily lives. However, it can be time-consuming and expensive to avoid single-use plastic when it is still the default material used by most companies.

It's not a good business strategy to thwart your customers' efforts to be eco-friendly as their dissatisfaction will erode their loyalty. Companies risk losing customers if they fail to respond to this demand for a plastic-free shopping experience. But on the flipside, they can seize the opportunity to differentiate themselves by making it easier for their customers to avoid plastic, empowering their customers by enabling them to shop sustainably. Organizations making changes to cut plastic waste from their operations are showing leadership in addressing this colossal problem we all share and will be rewarded for their efforts.

Part Two discusses this in more detail and provides the framework to help you make this happen within your organization.

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<sup>54</sup> <https://ciwm-journal.co.uk/deposit-return-scheme-england-save-councils-35m-year/>

# CHAPTER 9

## WHY BE A PLASTIC GAME CHANGER?

Being close to the sea has an incredibly positive impact on our mental wellbeing and physical health.<sup>55</sup> The benefits of “blue space” appear to be hardwired into our brains, perhaps left over from before we created this fast-paced, tech-crazed world we inhabit today.

The ocean inspires us and makes us feel connected to something bigger than us. Taking time out to be mesmerized by the sight and sound of waves relentlessly surging and retreating with the tide – and picturing it happening simultaneously on beaches all over the world – makes us realize the simple truth; that everything is connected. Therefore, if we pollute our oceans, we are ultimately polluting ourselves.

When we appreciate that waves have been crashing onto shorelines for millennia, and will continue to do so long after we have gone, it gives us a sense of perspective. The world doesn't revolve around humans and our fleeting wants and needs.

They say the greatest obstacle to change is apathy. But it's hard to understand how anyone can feel apathetic about the declining state of our beautiful beaches and oceans and the diverse array of awe-inspiring creatures that inhabit them. The global popularity of *Blue Planet II* shows that we are still captivated by them, but it's sad that most of us engage with nature via our screens rather than experiencing its vitality first hand.

One of the best side effects of taking on the mission to reduce plastic in your workplace is that it will add new meaning to your daily life. Exposing you to fresh ideas, kick-starting interesting and more profound conversations with your colleagues and suppliers, and giving you a renewed sense of purpose that will enhance your life at work and home.

We all need a vision that is bigger than ourselves, and while none of us can fix this problem on our own, we can be part of a positive movement determined to do what it takes to stop the flow of single-use plastic flooding into the ocean.

We are only on this planet for a short time, so let's do something important, something that really matters with our time; taking action that will transform the pervasive plastic pollution monster we've created into millions of solutions stemming from organizations all over the world, starting with yours!

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<sup>55</sup> <https://qz.com/1347904/blue-mind-science-proves-the-health-benefits-of-being-by-water/>



Do you want future generations to inherit our plastic mess, or would you like to leave a more positive legacy? You can make your meaningful contribution to humanity by committing to significantly reduce the plastic waste generated by your organization.

**Ready for a plan? Read on...**



**PART TWO**

**HOW?**

# CHAPTER 10

## A FRAMEWORK TO REDUCE PLASTIC IN YOUR ORGANIZATION

Deciding to step up and take responsibility to reduce plastic in your organization is a bold move; but one that will deliver many rewards for you personally, for your organization and of course for the planet. If you're feeling a little overwhelmed by the task at hand, this section will give you a framework to follow, putting you on the right track, and accelerating your progress.

The truth is, if you work in a business, school, college or any other type of organization, then you have an extraordinary opportunity to make positive changes that will have a far-reaching impact. Even changes made in small organizations will affect countless suppliers, colleagues, competitors, and customers over time, as your positive influence reverberates through your supply chain. Meanwhile, if you work for a large organization, you have the potential to make a genuinely game-changing difference, due to the scale of its operations and the number of people and processes you can affect.

It is a sad fact that today, most organizations use too much plastic and therefore they generate too much plastic waste. For too long, we have seen plastic as the cheap, easy, quick-fix “solution” to any requirement. We have come to rely on plastic due to habit, and not because it is a necessity. And by failing to question the logic of using an indestructible material for single-use purposes, we have collectively sleepwalked into a living nightmare of littered oceans, entangled creatures, and poisoned food chains. It's time to wake up, reimagine a better future, then take the necessary steps to turn it into our new reality.

While you're unlikely to be able to remove *all* plastic used in your organization, you can undoubtedly make a big difference by identifying several areas where you use plastic needlessly or excessively; implementing alternative solutions. Eliminating single-use plastic is the top priority. See the end of Chapter 13 for examples of some quick wins to get you started.

To become a Plastic Game Changer, you need to challenge yourself and your colleagues to think more creatively and relearn how to do business without producing mountains of plastic waste. It's important to highlight that anyone can be a Plastic Game Changer, in any role and at any level. There's a place for everyone to make significant positive changes. And the good news is, it's not rocket science.

To become a Plastic Game Changer, you will:

- Take responsibility for the plastic waste you generate.
- Innovate, by rethinking how you do things and discovering creative ways to slash your plastic use significantly.
- Create a ripple effect of positive change among employees, suppliers, students, customers, and your industry or community.

What's more, it's entirely possible to implement your plastic reduction project in a cost-neutral way, and even to generate additional revenue or cost savings from it. You will learn more about this and the business case for reducing plastic in your organization in the following chapters.

I've called my approach "The Plastic Game Changer 5 Ps" to make the chapters easy to remember and easy to implement. Read on to discover what they are and how they will enable you to channel your time and energy into something that truly matters for our world: successfully cutting your organization's plastic footprint.

# CHAPTER 11

## INTRODUCING THE 5 Ps

If you're tired of seeing piles of pointless plastic produced by your organization on your watch, you'll be heartened to know that the remedy is within your reach. You may be eager to get stuck in straight away, but you will make quicker progress if you follow this structured, strategic approach.

Here is an overview of the five steps that will enable you to become a Plastic Game Changer in your workplace. The forthcoming chapters will go into more detail for each one.

- 1. PICTURE**  
Open your eyes to the plastic crisis and picture your organization as part of the solution.
- 2. PLOT**  
Plot your current plastic usage to identify what needs to change.
- 3. PLEDGE**  
Pledge your commitment publicly to specific plastic reduction targets.
- 4. PLAN**  
Encourage creative ideas from your team, form a plan, then implement it.
- 5. PROMOTE**  
Share best practice and promote your successes to inspire others to act too.



## THEY MAY LOOK FAMILIAR

When you look at the 5Ps closely, you may recognize that these five steps are not new. They have been developed to encapsulate proven best practice strategy used to get results, for many years, by people and organizations all over the world.

The five key steps are:

1. Define a vision.
2. Quantify the problem.
3. Set targets.
4. Form a plan to achieve those targets.
5. Measure and communicate success.

Adopting these effective business planning techniques will enable you to achieve your plastic reduction goals.

## THE IMPACT YOU CAN EXPECT

You will be amazed by the benefits of becoming a Plastic Game Changer for you personally, for your organization, for wider society, and for nature; as your positive changes are amplified by the ripple effect. Some of the benefits will be unexpected, and some you will never hear about, but you can be sure that the positive impact of using less plastic in your organization will be extensive and transformational.

If you haven't already found deeper meaning in your daily work, becoming a Plastic Game Changer will provide you with purpose, allowing you to make a positive difference to the world by making changes that matter, in your workplace.

# THE BUSINESS CASE

If you need to convince your “rational mind” or anyone else of the logical and commercial benefits of implementing a full-scale plastic reduction project in your organization, here is the compelling business case:

- **Being a leader in your industry**  
Taking action to reduce plastic waste significantly will position your organization as a leader in your industry. Use this position to good effect and be generous with the knowledge and insights you gain. It’s in everyone’s interests for all companies to adopt practices that reduce plastic waste.
- **Saving money**  
You will find you can eliminate many single-use items, which will save your organization the time and money involved in frequently buying and replacing stock. Alternatively, you might replace them with reusable items that might cost more initially, but will save money in the long run.
- **Reducing waste disposal costs**  
Most organizations face high costs for disposing of plastic and other materials, whether for recycling or landfill. Reducing the plastic waste produced by your organization will save you money as well as improving your green credentials. You can even generate revenue by adopting the highest standards of recycling and treating waste as a resource.
- **Attracting and keeping eco-friendly customers and employees**  
Once a fringe movement, green consumers are now a growing tribe of passionate customers whose loyalty is worth earning. Plastic, in particular, has become an issue that increasing numbers of mainstream customers have become very vocal about, using social media to name and shame companies for “plastic fails,” and more positively, sharing examples of companies making an effort to find plastic replacements. If you show you are trying to do the right thing, they will become your most loyal advocates.

Meanwhile, our real world Plastic Game Changers reported that they now attract and secure the brightest talent when they promote their plastic reduction project during the recruitment process. People want to feel pride in the company they work for and are attracted to organizations with purpose. They are also less likely to leave due to dissatisfaction with their work.



- **Gaining independent recognition for your green practices**  
Reducing plastic waste will enable you to gain recognition and awards from independent bodies, providing you with excellent social media and PR stories to share, raising your profile among new audiences. You could start by checking out the Plastic Free Trust Mark, developed by the campaign group A Plastic Planet to help shoppers identify and choose products certified as plastic-free.
- **Pre-empting legislation**  
Many campaign groups are lobbying national governments to ban, tax or restrict the use of virgin and single-use plastics. By proactively making plastic reductions in your organization, you'll be ahead of the game, if or when new legislation restricting the use of single-use plastic comes into force.

# HOW TO GET YOUR BOSS ON BOARD

Senior managers have many competing priorities and often have to answer to the board or shareholders to explain any costs to the business. While your plastic reduction project will be financially beneficial in the long run, you will undoubtedly need to invest time, talent and budget upfront to get the project going, which are always limited in any organization.

If you need permission to allocate these resources to the project, here are some steps to help you get support from your boss:

- **Do your homework**

Start by identifying your organization's key goals, and also what drives your boss, then use this knowledge to present the plastic reduction project in a way that aligns with them, rather than relying on a desire to “do the right thing.”

For example, if a key goal is to recruit better talent and increase employee retention, frame reducing plastic as an excellent employee engagement tool, giving colleagues more creativity, autonomy, and purpose in their roles and boosting morale. Or if your boss is responsible for Marketing/PR, highlight how the project will provide a string of positive stories to inject new life into your content calendar.

- **Emphasize the short-term benefits as well as the long-term gains**

Sometimes leaders prioritize survival over self-actualization, so it's useful to highlight the quick monetary, efficiency and employee/customer gains the project will deliver, in addition to the obvious long-term benefits to the planet.

Will reducing plastic reduce workload? Make systems quicker/easier? Cut costs? In most cases, the answers are “yes,” because eliminating unnecessary single-use items from your operations will save time and money. Have a few quick examples ready to share (also see the preceding Business Case section, Examples of Quick-Wins in Chapter 13 and some of the “Real World Plastic Game Changer” insights towards the end of this book, and think about how they can be adapted for your organization).

- **Time, place and opportunity are critical**

Think carefully about when is the best time to approach your boss so you are least likely to be interrupted. Also choose a time, based on their preferences and working style, when they will be most open to considering a new idea and most likely to say “yes.”

- **Prepare your answers to any objections**

Use your knowledge of your organization's culture and your boss's personality to anticipate any questions and objections that might come up and prepare your responses in advance, so you have a stronger case.

- **Convey your passion & commitment**

After providing lots of rational and commercial reasons for going ahead, end your pitch on a more passionate note, explaining why the plastic reduction project is means so much to you; sharing your belief that your organization can make a big difference and showing your commitment to making it happen.

You may only get one chance to make your case to your boss, so make sure you put some time and thought into preparing your case to give yourself the best chance of success.

# CHAPTER 12

## PICTURE

Now you are ready to dive into the five Ps and start thinking about how to apply them to your organization. The first step is to open your colleagues' eyes to the plastic crisis and together start picturing your organization as part of the solution.

### START CONVERSATIONS

The best way to kick off your Plastic Game Changer project is to talk with your colleagues. By starting conversations about plastic pollution, you will very likely find that you are not the only person concerned by your organization's contribution to the problem. Thanks to the popularity of *Blue Planet II* and similar shows, and plastic's regular presence in the news headlines, mainstream awareness is at an all-time high.

Your organization may even already have stated an intention to reduce its plastic use, but your colleagues might not know how to go about making it happen. Getting everyone up to speed with the extent of the plastic problem, both globally and locally, while shining a light on how your organization's practices contribute to the crisis, is an excellent place to start.

You'll need to share the urgency of the plastic situation with your colleagues: plastic is piling up daily yet takes hundreds, if not thousands of years to break down; there's no time for complacency. We've been using an indestructible material for single-use purposes for too long already.

What you tell them doesn't need to be new; it's better if they already know about the plastic issue. But bringing it to their attention again will help move it to the top of their agenda, and highlight the importance of cutting the plastic waste generated by your organization, as soon as possible.

It's vital to get the tone right to avoid anyone feeling nagged or attacked for the way they do things. Try to choose inspiring language, that includes yourself as part of the problem (because let's face it, we've all used excessive single-use plastic in our lives), and suggests that together you can become part of the solution by resolving to make some significant changes.

## OPEN THEIR EYES

One way to help your colleagues see the urgency of the plastic situation, is to hold a screening of an educational film such as *A Plastic Ocean* or *Trashed* and then have a group discussion afterward, to share how people feel about the problem and what they want to do to tackle it (at work and in their personal lives).<sup>56</sup>

Another option is to organize a talk and Q&A session, which everyone is strongly encouraged to attend. You could nominate someone internally who feels passionately about the subject to share their concerns (maybe yourself, you could use the information from this book!) or you could invite an external speaker to share their insights and practical strategies to use less plastic, to galvanize your team into action.

You can also use resources such as Less Plastic infographics (available digitally or printed at [www.lessplastic.co.uk/infographics/](http://www.lessplastic.co.uk/infographics/)) to raise awareness of the issues of plastic pollution in an eye-catching way that visually conveys the steps we can all take. You could even distribute copies of this book, or use some of the other useful resources listed at the end.

Crucially, you will need to go beyond merely highlighting the problem to your colleagues, but also try to motivate them to commit to doing what it takes to confront it. For most people, the most effective approach is to tap into something that makes them care. This is why beautifully shot films like *A Plastic Ocean* or documentaries like *Blue Planet II* work so well; they give us glimpses of what we will lose if we fail to act quickly enough.

## A VISIBLE PROBLEM ON YOUR DOORSTEP

Organizing a team clean-up of a local park, street, river or beach, will quickly bring your colleagues up to speed on the urgency of the plastic crisis by highlighting the scale of plastic pollution on your doorstep. Nothing beats first-hand experience: seeing and taking on board how the plastic we use in our everyday lives spills out into our environment. This is true even when we've disposed of it responsibly, because of widespread inappropriate and excessive use of plastic, and the inevitable inefficiencies of our waste infrastructure that can't keep pace with production.

A clean-up event with your colleagues is also a great way to bond, doing something meaningful together, and will help focus your plastic reduction efforts. You're likely to pick up lots of single-use plastic and polystyrene during

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<sup>56</sup> More information about the films can be found at: <https://plasticoceans.uk/> and <http://www.trashedfilm.com/>

your clean up. Make these your top priorities when it comes to deciding which plastic items to replace first, later in the process.

What's more, taking time out of your daily operations to make a positive contribution to your local community, by cleaning up waste, is a great way to give back and behave as a responsible organization. You could even decide to make it a regular monthly, or quarterly event, possibly inviting your colleagues' families too and providing (plastic-free) refreshments to make it a social affair. Or encourage colleagues to go "plogging" (picking up plastic litter while jogging) in their lunch breaks to enhance fitness, mental health, and your local environment. You could share photos from these events on your social media pages or website, or just internally, to show customers or other employees that your team cares about plastic pollution and is doing something to combat it.

## A SHARED VISION

Once everyone is aware of the pervasiveness of plastic pollution, and they understand that it is caused by rampant plastic production that urgently needs to stop, you can set to work creating a shared vision that pictures your organization as part of the solution, by reducing demand for plastic in the first place. You won't have all the answers yet, but together you will work them out.

First, agree together that you want your future plastic usage to be radically different from your past. The key is to believe you can make it happen, in a relatively short timescale. Other organizations have already made outstanding headway in cutting their plastic footprints – so it is entirely possible – and many more will soon join their ranks. Don't get left behind! Be encouraged that the changes your organization makes, when added to those of others, will join together to result in exponential change.

Success will look like: immaculate streets, litter-free parks, and unpolluted rivers and beaches. This will be achieved by a global cultural shift away from our current wasteful, polluting linear economy to a clean, efficient system that goes to great lengths to avoid generating waste; for economic, social and environmental reasons. Single-use plastic will become like tobacco is today among some groups. People won't want to be seen using it, and they won't want to work for companies that profit from it, or that profit from creating single-use plastic waste.

The plastic legacy we have already dumped in our oceans will continue to wash up on our shores for many years to come. But with concerted efforts to clean up and capture the plastic waste the sea brings back to us – adding these materials to a circular economy that turns waste into useful items designed to last – we will slowly restore our oceans. The decline in plastic pollution will be

reflected by a delayed, but notable, decline in the number of birds, animals, and fish harmed or killed by plastic on land and in the sea. Natural habitats will gradually be restored, biodiversity will thrive once more, and we will prevent many species from extinction, including our own.

Your team will understand that to enjoy this prospect, they need to act now because if we don't collectively turn off the tap of plastic production, we will face a grim alternative future embodying the polar opposite of this vision of success.

## A GUIDING TEAM

While I've written this book for change-making individuals who feel compelled to do something meaningful to solve the problem of plastic pollution, you will give yourself the best chance of success if you don't try to take on plastic in your organization on your own.

Ideally, you will gather a core team of colleagues who believe in the cause as passionately as you, who are very motivated to make reducing plastic in your organization their primary objective.

In the acclaimed business change management fable *Our Iceberg is Melting*,<sup>57</sup> the author John Kotter highlights that the most effective way to implement significant change within an organization is to gather a guiding team of people (or in his case penguins). He recommends choosing five people from different levels, with diverse expertise, who can bring a mix of strengths to the group, so that together you will encapsulate these essential attributes:

- Leadership skills/authority.
- Credibility/likeability.
- Communications skills.
- Creative thinking skills.
- Analytical skills/technical expertise.
- A sense of urgency/track record of getting things done.

By picking the right people with the right combination of qualities, and investing a little time into team bonding so that the individuals work well together, you will create a powerful group that will be listened to by your colleagues and have the best chance of initiating a positive wave of change through your organization. I highly recommend you read the penguins' short tale as it is full of invaluable wisdom that will further help you on your quest.

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<sup>57</sup> <https://www.ouricebergismelting.com/>

# CHAPTER 13

## PLOT

The second of the five Ps is to plot your organization's current plastic usage to understand the full extent of how much plastic you use now and identify what needs to change.

### DEFINE WHICH PLASTIC TO TARGET

First, you'll need to define the type of plastic you are targeting with your plastic reduction project, so you are clear about what you are plotting. As I said in Part One, not all plastic is bad. Sometimes it makes business and environmental sense to use plastic as a lightweight, yet durable, material for items that will be reused many multiples of times.

The primary cause of the plastic pollution crisis is single-use plastic, so for most organizations, this would be the key area to address. You will need to precisely define what "single-use plastic" means in your organization, relating to your operations. For many, it will mean a plastic item that is designed to be useful for no longer than one month, before being discarded. Even if you are dealing with products packaged in plastic for many months, I would argue they fall into the single-use category, as once that product is opened, the packaging is redundant and will be thrown away, unless it is a returnable, reusable option.

I would also urge you to include single-use bioplastics, biodegradable plastics and compostable plastics in your plastic audit because, as we saw in Chapter 6, they are not the quick-fix solution they first appear. Unless you can guarantee you will capture them to dispose of them appropriately, they are no better than "normal" plastic.

Write a few bullet points to define which types of plastic your plastic reduction project is targeting and therefore what you will plot.

### PLOT YOUR CURRENT PLASTIC USAGE

Capturing data to reflect your organization's present plastic usage will shed light on how much plastic your organization currently buys, uses and throws away internally, or passes on to customers for them to discard. If this part of the process sounds off-putting, don't worry. I thought this would be the most arduous step of the process too, but as you'll read about in the "Real-World Plastic Game Changer" story in Chapter 20, the Head of Sustainability at Surfdomo, Adam Hall, shared that for them this was one of the quickest steps.



Every business is unique, but at Surfdomo, Adam was able to quickly understand the volume, cost, and weight of the plastic packaging they used by accessing “business consumables” spreadsheets which detailed the entire business’s last twelve months of purchases, including all plastic and single-use plastic items. He then used this to inform decisions on what to address first.

Alternatively, you may need to go round visually noting how much plastic each department uses; or look at orders they have placed in the last one to two years, highlighting which ones contained single-use plastic that contributed to plastic pollution.

Plotting your plastic use will allow you to see “before” and “after” figures to track the success of the project, and will also help you identify the most significant sources of plastic waste in your organization so you can prioritize what needs to change first. Don’t forget to look at deliveries from suppliers too, so you can track how much single-use plastic packaging your organization’s purchases generate.

## **THE IMPORTANCE OF BENCHMARKING**

Taking note of benchmark figures at the start of the project is extremely important to create realistic yet challenging targets and also to be able to highlight the cost and plastic savings the project achieves.

You’ll need a snapshot of the plastic your business has purchased over the last twelve to twenty-four months that you can compare against the next twelve months and beyond as you implement your Plastic Game Changer strategies.

## **CAPTURE PLASTIC COST AS WELL AS VOLUME/WEIGHT**

You will want to capture the current costs of the target plastic items you are looking to remove from your organization, in order to track cost efficiencies of the project further down the line.

If your board is supportive, the ideal approach would be to ring-fence any cost savings achieved by reducing plastic purchases to be reinvested into the project. Inevitably some alternatives to plastic will be more expensive; for example, reusable or returnable packaging solutions that may need an initial outlay but then won’t require replacing as regularly. Sometimes the more sustainable (recycled and recyclable) single-use items are more expensive than the non-recyclable options.

Overall, the businesses I interviewed for the “Real World Plastic Game Changer” stories in this book have found that the financial and other benefits of cutting plastic have far outweighed the costs, and most of them are achieving it as a cost-neutral project.

Either way, you will want to be able to prove that the costs of the project do not outweigh the benefits, with hard numbers to present to your executive team as you progress.

## WHAT TO PLOT

You’ll need to plot the weight, volume and cost of key plastic items purchased by the business from operations, packaging, marketing/promotional materials, stationery, kitchen/canteen, catering and any other areas that stand out as the principal sources of plastic waste in your business.

It would also be beneficial to plot how much business waste you currently generate by volume, weight or number of skips, bins or containers; and the associated cost to the business. As your project progresses and you succeed in persuading suppliers to reduce plastic packaging too, you will inevitably see your business waste costs plummet, and it will be very satisfying to highlight this situation.

See the template referenced in the Resources section in the back of this book if you need help plotting your plastic use and plastic waste.

## FIND SOME QUICK WINS

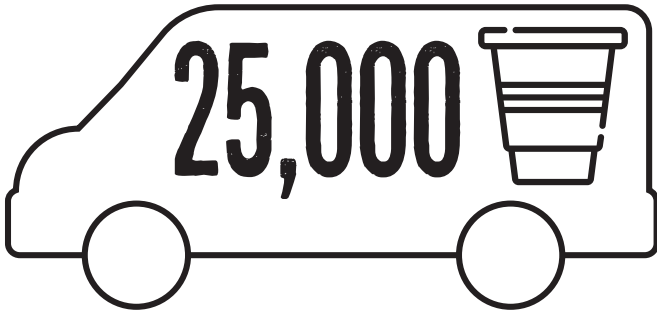
The best approach is to look for some quick wins to kick off the project: some easy, no-brainer changes that give you early momentum and create a positive feedback loop. You will spot these more easily once you have started plotting your current plastic usage.

For example, if you identify that your organization purchased 25,000 single-use plastic cups for the water dispenser in the last twelve months (an average weekly usage of around 480 disposable plastic cups; 100 people using less than one cup a day), deciding to stop this practice immediately will make around £120 direct cost savings for not replacing the cups. There will also be indirect cost savings achieved by removing the need to regularly reorder the cups, and by generating significantly less non-recyclable business waste.

## VISUALLY DEPICT THE PLASTIC SAVINGS

You can go a step further by visually depicting those cups so that the plastic savings are more meaningful when communicating them to your colleagues, to maintain their enthusiasm and support for the project.

For our example, 25,000 standard 7oz disposable plastic water cups would fill one standard transit van, internally to the brim.<sup>58</sup> That is a lot of non-recyclable plastic waste prevented, in just one year, just by making one change. Even if you only currently use half that number of cups, it is still shocking to imagine it would only take you two years to fill a transit van with just your organization's disposable plastic cup waste.



Visually depicting the waste like this is useful, because with plastic it is so often a case of “out of sight, out of mind.” Finding ways to picture the waste we create and prevent is a useful tool to get buy-in across the board when implementing change.

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<sup>58</sup> Calculation: The inside of a transit van measures: height 185cm, width 170cm, length 400cm = 12,580,000cm<sup>3</sup>. A plastic cup measures: 10cm x 7.1cm x 7.1cm = 504.1cm<sup>3</sup> (if it was rectangle, there is a slight approximation here because the van interior is more rectangular than the cups). Therefore 12,580,000cm<sup>3</sup> ÷ 504.1cm<sup>3</sup> = 24,955 plastic cups would fill the transit van, rounded up to 25,000 because you could probably squeeze another 45 cups inside.

# SOME IDEAS OF SOME QUICK WINS

Here are some ideas of some quick-wins that may work in your organization.

- Provide unlimited filtered tap water, for example by setting up a mains-fed water dispenser.
- Remove any disposable plastic cups, encourage colleagues to bring reusable water bottles instead and provide reusable glasses in the employee kitchens.
- Promote the concept of BYO lunch to work (in reusable lunchboxes or using reusable beeswax wraps).
- For people who don't have time to make lunch at home, suggest they could bring an empty lunch box to take along to their preferred takeaway lunch spot to avoid the need for disposable plastic packaging.
- Remove disposable plastic from your kitchens and canteens and replace with washable reusables.
- If your workplace provides stationery for colleagues, reconsider whether this is necessary. If it is, question the quantity of stationery provided, because so much more can now be done digitally.
- Try encouraging your colleagues to switch to wooden pencils, refillable fountain pens, and pencil highlighters to reduce disposable plastic. Request that they are delivered not wrapped in plastic.
- Choose FSC recycled paper products over plastic.
- If files or folders are needed, look for ones made from recycled cardboard, you can get a variety of colors, or opt for craft/manila color.
- If notepads or diaries are necessary, find options with cardboard covers such as the Moleskine Kraft cover options.
- Query whether business cards are needed. When you meet someone you could enter their details in your phone and follow up with an email providing your details. If business cards are still required, phase out any laminated designs, go for uncoated recycled FSC card so they are easier to recycle.
- Stop using jiffy bags and bubble wrap, use recycled paper void filling or shredded paper or cardboard instead, which is also cheaper, especially if you reuse paper/cardboard that comes into your business.

- Use paper gum tape instead of plastic Sellotape.
- If laminating, consider reusable plastic pockets instead.
- Remove individual desk bins and start recycling as many items as you can in a central collection points, sending them to Terracycle if your waste contract doesn't recycle them.
- Consider going printer-free to save paper and printer cartridges.
- If you have a canteen, remove disposable cutlery, cups, takeaway boxes and sandwich wrapping and ensure any vending machines only contain glass bottles or cans (more easily recyclable).

See also “9 ways to reduce plastic in your workplace” at [www.lessplastic.co.uk/infographics/](http://www.lessplastic.co.uk/infographics/).

# CHAPTER 14

## PLEDGE

Now you are clear on how much plastic waste your organization generates, and where the hot spots are, it's time to set some plastic reduction targets and publicly pledge your commitment to them.

### DEFINE YOUR PLASTIC REDUCTION TARGETS

First, you'll need to define a challenging yet realistic target for how much plastic you intend to reduce within your organization, and by when. The key is to ensure your target is bold enough to make a difference, but not so difficult that it will be doomed to fail.

For example, you could decide to pledge to eliminate all single-use plastic from your business by 2022, which is a SMART goal because:

- Specific – it refers to single-use plastic, rather than all plastic.
- Measurable – you can easily see whether you have succeeded.
- Attainable – other businesses have done this before, it won't be easy, but it is possible.
- Relevant – as discussed throughout this book, it's a very pertinent and necessary goal.
- Timely – we need to reduce plastic pollution now, so action by 2022 will focus your organization on doing what it takes to achieve your goal in time. If you work for a smaller organization make the time frame shorter; it's good to have a challenge!

### A NEW NORM

Just putting thought into your plastic reduction target and verbalizing it will set you on the road to success. Behavioral change studies have shown that when we commit to a course of action, we internally cement it as a new norm or moral standard. If we later detect misalignment between our actions and our values and beliefs we experience “cognitive dissonance,” which is uncomfortable, so we work hard to avoid this at a subconscious level by correcting our behavior. In other words, we harness the power of the subconscious to help us achieve our goals.

The most effective pledges are written pledges that are made public. You can do this as a group – at team or organizational-level – and individually. Inviting colleagues to pledge to reduce plastic in their professional roles and personal lives will hopefully be well-received by most, especially if you successfully opened their eyes to the problem in step one.

See the pledge template referenced in the Resources section in the back of this book.

## **BEING ACCOUNTABLE**

Even with the best intentions, we humans are very good at overcommitting and under-delivering when we make informal promises to ourselves and each other. Making our pledges formal and public forces us to be accountable because we will do everything possible to avoid publicly letting ourselves and others down.

Public pledges also provide an excellent way to keep your goals front of mind and high on your priority list, so you take the necessary steps to progress your plastic reduction project ahead of other competing responsibilities.

## **ENJOY PROMOTIONAL OPPORTUNITIES**

Publicizing your organization's pledge to reduce plastic will maximize the positive PR value to be gained from your efforts, as plastic is a topical and emotive issue, and the general public is very supportive of organizations who take action to reduce it.

Some recent high-profile examples of companies pledging to reduce plastic in the UK include:

- Sky pledging to eliminate single-use plastic by 2020.
- Iceland Foods' pledge to make its own label range plastic-free by 2023.
- Boston Tea Party Cafés' pledge to ban disposable coffee cups in 2018.
- The UK Plastics Pact led by WRAP with over forty companies pledging that 100% of their plastic packaging will be reusable, recyclable or compostable by 2025.

This list is ever-growing. If you make a public plastic reduction pledge, you will be in good company!

As you'll discover in one of the "Real-World Plastic Game Changer" stories later, Boston Tea Party Cafés gained exceptional global press coverage and social media reach from their announcement that they would be the first coffee chain in the world to ban disposable coffee cups from their cafés.

## WORLD ENVIRONMENT DAY 2018

In 2018 the World Environment Day theme was "Beat Plastic Pollution." The professional body for environmental practitioners, IEMA (Institute of Environmental Management and Assessment), ran a campaign to encourage their members to #PledgeLessPlastic, personally, as teams, or as organizations.<sup>59</sup> The campaign was very effective in getting people to start talking about their plastic usage and what they could do to reduce it.

One IEMA member, Siemens, set up stalls at their many UK sites promoting plastic reduction by highlighting the issues with disposable plastic and ways that their employees could make a difference. They had quizzes with prizes, free reusable water bottles, and opportunities to make personal pledges to use less plastic and sign up for a company-organized beach clean. They also took action to reduce disposable plastic in employee canteens, by removing disposable coffee cups and reintroducing reusable crockery and cutlery. Siemens has over 15,000 employees in the UK, so raising awareness, and inspiring action among their teams added up to make a big difference.

While pledges to reduce plastic usage are welcome at any time of year, you might like to time a specific awareness event or project launch around an international environmental calendar date, to amplify your messages, such as: Earth Day (22nd April), Biodiversity Day (22nd May), World Environment Day (5th June), World Oceans Day (8th June) or World Rivers Day (27th September).

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<sup>59</sup> <https://www.iema.net/wed18>



# CHAPTER 15

## PLAN

The fourth step of your plastic reduction project is to design a plan to achieve your plastic reduction goals, then commit the time, people and budget required to implement it.

### A SHARED PURPOSE

The “plan” stage is the most substantial part of the process, but there is plenty of scope for it to be creative, empowering, rewarding, and fun. Because when your team is fired up to work together, with purpose, on a meaningful project, you will be amazed at what you can collectively achieve.

### BELIEVE YOU CAN

Belief in the certainty that you and your team can achieve your vision of reducing plastic in your organization is crucial, and it’s one of the most valuable insights I’d like you to take away from this book.

Taking time with your team to cultivate a shared and unshakeable belief – that you will succeed in reducing your organization’s plastic footprint – will carry you through the challenging parts of the process and be the biggest secret weapon on your road to success.

Plus, there’s no reason to think otherwise. People in many organizations are already making great strides in reducing their plastic waste. They are still in the minority, but they have shown it is entirely possible. Now is the perfect time for you to make a name for yourself, and join the plastic-free revolution.

# NO NEED TO REINVENT THE WHEEL

The ancient Chinese philosopher, Confucius, noted:

“By three methods we may learn wisdom: first, by reflection, which is noblest; second, by imitation, which is easiest; and third by experience, which is the bitterest.”

You are sure to learn by all three methods during the course of your Plastic Game Changer project, but you don't have to make it unnecessarily hard for yourself, thereby threatening your chances of success. Don't be afraid to learn from organizations that are ahead of you on their plastic reduction journey; be sure to include a healthy dose of imitation in your Plastic Game Changer project.

Replicating the strategies and tactics of others is something that the most effective leaders make a point of doing, reading the biographies of people they admire to learn the secrets of their success. That's why I have included some “Real-World Plastic Game Changer” stories from organizations from a variety of sectors in this book, so you can take inspiration from their experiences and benefit from the best practice they have developed.

## QUICK WINS

It's useful to first focus on the obvious quick-wins to gain early momentum for the project. You may already have got stuck into some of these during the plot part of the process. If not, now is the time to roll up your sleeves and get to work on a few of the easier changes that will cut plastic waste. These are the no-brainers that don't require too much thought or research to either eliminate or replace with something more sustainable, such as a reusable option or a recycled and easily recyclable option (in a closed loop to avoid waste escaping into the environment).

The aim is to avoid delaying progress. Rather than waiting to complete the perfect plan, it's better to kick off your learning process by addressing the most straightforward changes as soon as possible. You can then use the results of these early plastic reductions to inform your decisions when tackling trickier issues.

Each time you eliminate a single-use plastic item from your operations, calculate the plastic savings, and if possible, visually show them (see the example of plastic cups and the transit van in the “Plot” step, Chapter 13). Then you can use the visual examples as good news stories to share across your organization, creating a positive feedback loop.

After the first few successes, it is essential to keep up the pressure. Of course, you can celebrate but resist the temptation to allow complacency to creep in. Instead, push harder and faster to harness the positive momentum and deliver further successes on the back of the first, until your vision of an organization using significantly less plastic has become a reality.

- What are the biggest sources of single-use plastic in your role?
- What alternatives could you implement to eliminate waste, or at least remove single-use plastic from the process, almost straight away?

## **EMPOWER AND INCENTIVISE PEOPLE**

You and your colleagues are likely to be the people best placed to come up with solutions that will work in your roles, rather than them being dictated from the top, as you know precisely the source of any excessive and unnecessary plastic waste within your remit. You also know specifically what is required for any alternative substitutes to work.

Be sure that you are empowered by management to find alternatives to plastic in your roles. The goal is to remove as many barriers as possible so that the people in your organization who want to help make your vision a reality, can do so.

Another tactic is to proactively incentivize employees to discover ways to reduce plastic in their roles or within the organization as a whole. For example, you could run regular competitions between teams and reward those who make the most significant plastic savings, or hold a contest with an award for the most creative idea or the most innovative solution that has the greatest impact on your organization's plastic savings.

## **CREATIVE THINKING**

The most successful solutions will arise from employees and teams who challenge themselves to step back from the status quo and question whether the way you've always done things is truly the best way.

Plastic has been useful in business to date because it is cheap, light, durable and convenient, but now we understand the long-term negative impact of our over-reliance on plastic, the search for alternative solutions offers the perfect opportunity for innovation and creativity.

Many of your colleagues will relish this chance to work on something that matters and makes a significant difference in the world, so the plastic reduction project has the added benefit of being a brilliant employee engagement tool.

Make time to look at all areas of the business where you use plastic and brainstorm ideas with the relevant employees on how to reduce or eliminate disposable plastic. Drawing together lots of people with lots of different skills will result in better thinking.

Here are some helpful questions to ask during the brainstorming process:

- Do you need it, or do you just use it because you always have?
- Can you cut it out altogether?
- Is there a more sustainable/reusable/digital alternative?
- Are the alternatives truly more eco-friendly? (See Part One for help with this.)
- When designing products, think about their end of life; what happens then?
- Can you instigate some bold return/repair/closed loop recycling initiatives?
- Can you and your suppliers switch to returnable, refillable or reusable packaging?
- Can you cut plastic waste by changing what you buy, or where you buy it from?
- Can you speak to your suppliers about being more sustainable with their packaging? (Consider implementing a new Delivery Policy with guidelines on what materials you will accept.)
- If your suppliers make a change for you, can they do it for other clients too, amplifying the impact?
- Can you take the opportunity to educate customers so they understand the reasons you've made changes, and so they know what to do with your products/packaging to ensure they are as eco-friendly as you intended?

## ACTION PLAN

Once you have elicited lots of creative ideas from your team to cut plastic in your organization, you will need to formulate an action plan and commit to implementing it, by allocating time, talent and budget (if necessary) to make sure it happens.

As part of the process you will need to:

- Decide which actions are a priority, i.e. the ones that will make the most significant impact.
- Identify any new skills or processes that need to be adopted.
- Decide how long any transition period will be, to give people time to embed new practices.
- Provide a budget for any additional expenditure required.

First, capture each action and assign it to a person/department, so everyone knows who is responsible for delivering the outcome. Give them their target (e.g. reduce/eliminate plastic waste) and how much time they have to implement it, including any budget, if available.

Be clear on how regularly everyone is expected to report back with their success. As this is an urgent topic, I recommend frequent quick check-in meetings or phone calls where each person is given five minutes to share the status of their actions and ask for any group input or support as required. Frequent meetings will keep up the pace of change.

See the action plan template referenced in the Resources section in the back of this book if you'd find it helpful to keep you on track.

## ACCOUNTABILITY

Now is an excellent time to pause and revisit the reason you are reading this book and what you hope to achieve.

I'd like you to take a moment to think ahead and visualize what plastic will have been eliminated, thanks to your efforts, and your decision to start this process within your organization.

Write down what key successes you want to have achieved:

- Six months from now?
- Twelve months from now?
- Two years from now?

Can you then paint a quick picture in your mind of how much plastic waste you will have prevented by these actions?

Can you imagine that equivalent waste crammed into a landfill or floating down a river and out into the ocean if you haven't succeeded?

I really hope you feel motivated to press on and keep yourself accountable. It will be so worth the effort!

# CHAPTER 16

## PROMOTE

The fifth and final step of your plastic reduction project is to measure the results, share best practice and promote your successes, to inspire other organizations to act too.

### WHAT GETS MEASURED GETS IMPROVED

The adage is true. Measuring the results of a project provides a regular feedback mechanism and will enable you to understand what is working well, and what is not working, so you can learn from your successes and failures, and highlight what areas need further attention to keep you on track.

Commit to regularly reporting your plastic reduction results (internally or externally) to focus your efforts on your goals and monitor your progress towards achieving them.

### PLASTIC SAVINGS

The key results to capture are, of course, plastic savings as they are the whole purpose of this project. You will need to regularly measure the amount of plastic your organization directly purchases to create its products and packaging and to run its day-to-day operations, and then compare this to your benchmark figure in step two, and the targets you committed to in your pledge, in step three.

When you succeed in reducing this figure, you will have reduced demand for plastic in the marketplace which will lead to less plastic being produced and less plastic becoming pollution at the end of its useful life.

Try to measure plastic savings by unit and by weight. See the Plot section in Chapter 13 for a reminder of ideas to visually depict your good news stories.

Report the savings internally to thank your colleagues and reward achievements. You can ensure there is a monthly update email or an in-person presentation, possibly linked to a fun event such as a (plastic-free) pizza Friday or a bring-a-lunch-dish-to-share day. When you hit key milestones, be sure to celebrate together.

It's also beneficial to report the savings externally, emphasizing how much plastic your organization has prevented from going to landfill or escaping into the environment, thanks to your plastic reduction efforts. For example, you could display a running total on your website that monthly figures feed into and also post monthly or quarterly updates on your social platforms. These public updates provide a great reminder of why you are doing the project, keep you accountable and will gain you recognition for your efforts.

## **COST SAVINGS**

It is essential to track any cost savings achieved, or any additional costs incurred, by the project so that you can justify it on commercial as well as ethical terms.

As you will read in the case study section of this book, real-world Plastic Game Changer, Adam Hall from Surfdomo, reported that in the first year his plastic reduction project cost the business just £900 (mainly due to the additional cost of cardboard boxes for online orders when compared to the plastic polybag packaging they had previously been using). However, given that they sent out 2.5 million packages during this period, he viewed this extra cost as nominal. What's more, once you account for the positive PR exposure the plastic reduction project generated, and positive feedback received from customers, particularly on social media, the £900 could be seen as a shrewd investment. By year two, he had achieved cost-neutral plastic reductions and going forward Surfdomo's project is realizing cost savings due to the operational changes implemented across their business to reduce plastic, and other waste materials, and increase overall efficiency.

To assess the financial impact of your project, you will need to capture the cost/benefit of:

- Eliminating plastic items altogether.
- Replacing single-use plastic with more sustainable alternatives.
- Reducing business waste costs by sending less plastic to recycling/landfill.



# WASTE SAVINGS

Business waste might not be something you've taken much notice of in the past. It's certainly not the most glamorous of subjects! However, it is an integral part of this project.

Waste savings differ from the plastic savings we've discussed above because some plastic waste comes into your organization indirectly (i.e. you haven't explicitly ordered it), such as supplier packaging and rubbish created by employees' lunches.

To have an impact on plastic pollution, we need to stop treating waste as "out of sight, out of mind" and start acting as if we had to live with all the waste we generate in our own backyard, to give us the incentive to take effective action to reduce it.

Tracking the amount of waste your organization sends to landfill or recycling is a fundamental metric to measure and one that you should see decrease dramatically as the results of this project kick in.

# THE BROADER PICTURE

As previously mentioned, there are many other benefits to be gained from cutting plastic in your organization. You can quantify the broader impact of your plastic reductions by tracking the following figures compared to the same time last year (before implementing the changes):

- Sales/profit (have they been impacted?)
- Customer feedback (have you received more positive comments and fewer complaints?)
- Employee feedback (does the project motivate them?)
- Employee turnover (have you experienced a decrease in people leaving?)
- Social media (have your follower numbers and engagements increased?)
- Press coverage (have you received any positive local/industry/national press coverage?)
- Independent recognition (have you received any industry/sustainability awards?)

- Are there any other measures you use to assess the health of your organization?

Enhancing your understanding of how your plastic reduction efforts are affecting every aspect of your organization, means you can adjust your actions where necessary to ensure they are financially and operationally viable as well as being beneficial for the environment.

## AMPLIFY YOUR IMPACT

Once you have identified what works for your organization – and can prove it backed up by numbers – it's time to step into your role as a real Plastic Game Changer.

Sharing best practice with your clients, suppliers, competitors and your industry or community is an excellent way to show leadership and inspire others to take action too. You can do this by contributing to industry publications, blogging about your experiences, holding workshops or events for your suppliers, industry peers, and even competitors to share the key insights you have learned along the way, and perhaps collaborate by pooling purchasing power to bring new solutions to market more quickly.

As you highlight the urgency of tackling excessive plastic usage and show that the solutions are possible and within reach, the ripple effect is sure to be far-reaching. You will never know how many people you impact, but it's a great feeling to know that your actions have undoubtedly prompted a wave of positive changes.

A more commercial reason to promote your successes is to take advantage of the brilliant PR and social media opportunities that plastic reduction news stories provide. You're sure to impress your potential and existing customers as well as successfully attract the brightest talent to your organization and improve your track record of employee retention.

# CHAPTER 17

## MAINTAINING CHANGE

Once you've achieved your initial plastic reduction goals, you'll need to switch to maintenance mode to ward off disposable plastic creeping back into your organization.

### THERE IS NO END-POINT

I hope you won't be discouraged to hear that there will never be an end-point to your plastic reduction efforts, although they will undoubtedly get easier. The key is to avoid complacency, because sometimes when we achieve our goals and see improvements, we relax, and stop doing what caused the improvements in the first place. To enjoy long-lasting change, you will need a plan in place to support it; otherwise single-use plastic is likely to start appearing in your organization again.

This might be why Alcoholics Anonymous tells people they will always be alcoholics. If they are aware that they could relapse at any time, they know they need to keep doing what they need to do to stay sober for a lifetime. In the same way, rather than being an isolated project, minimizing plastic use should be a continual process that is core to your operational procedures for as long as you are in business.

Monitoring the amount of single-use plastic avoided by your organization every month, alongside your other KPIs (Key Performance Indicators), will enable you to maintain awareness and focus your ongoing plastic reduction efforts in the right places.

Taking note of the cumulative effect of plastic savings made over time will provide you with regular good news stories. While promoting your successes internally among colleagues, perhaps with a running total of the equivalent number of skips of plastic waste your collective efforts have prevented from reaching the oceans, will help keep your colleagues engaged and motivated to stay on track.

## MAKING IT STICK

Our behavior is influenced by those around us. Therefore, the secret to long-term success is to create a culture of sustainability, where using less plastic is the norm. But culture doesn't just happen overnight; it is the accumulation of your colleagues' behavior over time.

If you've followed the 5Ps you will have successfully changed many behaviors in your organization, but how do we make these changes stick? How can we reap the full benefit of a cultural shift, to one where we can permanently and effortlessly eliminate wasteful practices?

The key to changing organizational culture, and long-term behavior, is to change your colleagues' everyday habits. Because our habits compound over time, our daily actions will eventually lead us to either point A or point B, which are very far apart. In the case of using plastic, point A is a polluted world and point B is a clean one. Even though small actions feel insignificant at the time, they set us on a path to one of these destinations. We need to be sure to choose the right path, by choosing the right habits.

The most effective way to adopt good habits is to identify as something or someone that would embody those habits. For example, you are a sustainable organization; an eco-friendly person; a Plastic Game Changer. Talk about your organization/yourself in this way to convince your subconscious, and then it will do the harder work.

If you are currently a smoker and want to give up, start calling yourself a non-smoker, and you will feel a high level of discomfort at a subconscious level (cognitive dissonance) every time you reach for a cigarette. If you want to start a new running habit, call yourself a runner, and subconsciously you will be looking for opportunities to fit in a run.

When we believe ourselves to be something, our habits align with our identity, and we feel uncomfortable and autocorrect when they don't. Make sustainability, and plastic reduction, a core element of your organization's mission statement, website "about" pages, sales and marketing materials, and any policies and procedures documents issued to new employees (and available for existing employees to reference); to reflect your organization's sustainable, plastic game-changing identity.

In James Clear's excellent book *Atomic Habits: An Easy, Proven Way to Build Good Habits & Break Bad Ones*,<sup>60</sup> he explains that there are four ways to adopt habits that will take us to the destination we want (or to break habits to avoid the destination we don't want):

1. Make it visible (or for bad habits, invisible).
2. Make it attractive (or for bad habits, unattractive).
3. Make it easy (or for bad habits, difficult).
4. Make it satisfying (or for bad habits, unsatisfying).

So, in the case of making your colleagues' plastic reduction habits stick within your organization, you need to set up your work environment, systems and processes to make the plastic-free options more visible, more attractive, easier and more rewarding than disposable plastic ones.

For example, if you'd like to encourage colleagues to avoid plastic-wrapped take-away lunches from the local sandwich shop, you need to make the alternatives more visible, more attractive, easier and more satisfying. That might mean inviting a local catering company to come into your offices at lunchtime every day to offer delicious, pre-prepared, plastic-free lunches that people don't have to leave the building to get. It might mean encouraging employees to bring their own lunches to share (if they find the time spent together sharing and trying new food rewarding). It might mean issuing everyone with a reusable takeaway container to take to get filled up at the sandwich shop. Test different ideas to see what works best for your organization's culture.

If you already have a canteen in your workplace, there is a lot you can do to reduce plastic; such as removing disposable cups, plates, and cutlery, and eliminating as many plastic-packaged items as possible, particularly plastic drink bottles.

You can also influence buying behavior through the positioning of items. In their bestselling book, *Nudge: Improving Decisions about Health, Wealth & Happiness*,<sup>61</sup> co-authors Thaler and Sunstein shared how buying behavior in a school cafeteria was significantly changed, without changing any items on the menu. By merely redesigning the layout, and positioning certain items at eye level and in other prominent hot spots, they were able to increase purchases of some items by as much as 25%, proving that with a few simple design adjustments we can manipulate behavior. You can use this insight to make modifications to your work environment so that it's easier for your colleagues to use less plastic on autopilot.

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<sup>60</sup> <https://jamesclear.com/atomic-habits>

<sup>61</sup> <https://www.amazon.co.uk/Nudge-Improving-Decisions-Health-Happiness/dp/0141040017>

Here are some ways you could redesign your work environment to help your employees use less plastic:

- Removing disposable plastic cups, plates and utensils from water coolers, kitchens, and canteens and replacing with washable reusables instead.
- Removing bins from individual desks and replacing with segregated recycling bins in a communal area.
- Instigating a “bring and share” lunch day every week/every month (with the added benefit of being a social occasion), to encourage colleagues to make and bring a homemade plastic-free lunch, promoting eco and healthy habits.
- Consciously deciding not to stock the stationery cupboard with disposable plastic pens and other plastic items that aren't critical to the business.
- Removing printers and photocopiers, or reducing their numbers (ink cartridges contain lots of plastic).

Some of these changes might result in grumbles from some of your colleagues because people often resist change. You can minimize complaints with good communications explaining the reason behind the changes: to reduce your organization's plastic footprint. You are likely to find that even the loudest objectors will soon adapt because humans are social creatures, so we're remarkably quick to accept new social norms.

When the UK government introduced the new 5p plastic bag charge in England in 2015, some customers initially complained that it was another way to tax consumers. However, just one year later, research indicated the majority of shoppers were in the habit of remembering their reusable bags, and plastic bag usage in the “big seven” British supermarkets fell by 86% after the legislation was introduced.<sup>62</sup>

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<sup>62</sup> <https://www.gov.uk/government/news/plastic-bag-sales-in-big-seven-supermarkets-down-86-since-5p-charge>

## WHAT TO DO IF YOU SLIP UP

It's essential to have a plan that kicks in if your plastic waste starts to increase again. For example, this could happen if your colleagues or suppliers lose sight of the reasons why you are using less plastic as an organization, or if complacency creeps in.

You may not think it's a problem if single-use plastic sneaks back "just this once," but if we said that every time, it would add up over time to be a lot of avoidable plastic waste that we failed to eliminate. The truth is, you will slip up, but the sooner you realize it's happened, the sooner you can course-correct. So stay vigilant and keep an eye on your plastic savings and plastic waste metrics.

If you notice an increase in disposable plastic being used in your organization, revisit the 5Ps as quickly as possible – particularly "Picture" – to remind everyone why you are making these efforts as an organization, and to guard against complacency. You could arrange a screening of another inspirational film or invite a new external speaker in, to motivate your team again to do what it takes to minimize plastic use.

If necessary, you can go through the whole 5Ps framework again (more quickly this time) – to remember the reason why you want to use less plastic; be aware of what plastic you are currently using; restate your commitment anew; take the appropriate action to get back on track; and measure your progress.

Chapters 19 to 23 share insights from five real-world Plastic Game Changers, who are already leading the way with their plastic reduction projects in five different industry sectors, including education.

# CHAPTER 18

## THE ROAD AHEAD

Change can be tough, but you never hear anyone say it wasn't worth it. Instead, you hear stories of how it has enhanced their lives in ways they could never have imagined at the outset. Whether that's through learning new things, acquiring fresh skills, meeting different people, or developing better relationships, becoming a Plastic Game Changer is sure to be a rewarding experience.

You might be thinking that it all sounds like a lot of hard work. But anything important takes time and energy. Much better to invest these finite resources on something that *really* matters. Reducing plastic in your organization will make your life richer with the satisfaction of knowing you have done something meaningful to protect human health and our planet.

Reducing plastic in your organization is sure to set off a chain reaction of positive consequences that would otherwise not have been realized.

### HOW TO GET STARTED

If you've reached this stage, you're already part way there. Just by reading this book you've started the "Picture" part of the process, beginning to envision yourself as a Plastic Game Changer within your organization, industry, and community.

Once you've read the real-world Plastic Game Changer stories, your mind will be buzzing with ideas of how you can apply some of the insights to reduce plastic in your organization.

The next step is to make a few easy changes to get some momentum going. Maybe you already did this when you were reading about the quick-wins earlier in the book.

If not, I'd love for you to take a few moments now to think of a couple of things you could quickly change, and write them down here, or capture them on a notepad, or on your favorite device.



What will you do to reduce plastic in your organization:

- This week?
- This month?
- This quarter?
- This year?

## **READY TO BECOME A PLASTIC GAME CHANGER?**

Would you be prepared to capture those ideas above and turn them into a public commitment?

As you've already seen, an excellent way to hold yourself accountable and make sure you achieve your potential for change is to post your commitment to reduce plastic publicly on social media.

I'd love to hear what you're planning to do! If you'd like, you can use the hashtag #PlasticGameChanger and tag @LessPlasticUK on Instagram, Facebook or Twitter.

I wish you every success in your mission to become a Plastic Game Changer.



**PART THREE**

**REAL-WORLD  
PLASTIC GAME  
CHANGERS**

# CHAPTER 19

## SKY

In late 2017, the media and telecoms company, Sky UK, announced an ambitious pledge, to eliminate single-use plastic throughout its business operations by 2020.<sup>63</sup> The vision came from the CEO's aspiration for Sky to use its voice and reach to have a positive impact on ocean health.

I interviewed Vicki Flaxten, Head of UK Supply Chain in January 2019, to understand how the project was going and what impact it was having within their business and beyond.

### A SENSE OF URGENCY

The first valuable insight Vicky shared was that Sky made their commitment public before they had a concrete plan on how they would meet it. The business didn't want to be held up waiting to formulate the perfect plan. Instead, they dived straight in with a bold, inspiring goal and a short deadline to keep everyone in the business focused on delivering it.

Long-term plans often result in leaving the most challenging work for "the future." Sky felt a sense of urgency was required to get the right things done, quickly. The plastic pollution problem needed a radical approach, and incremental changes would not be enough.

The scope of their goal, to eliminate single-use plastic in three years, stretched right through the business, from TV production and make-up, through to sports and corporate events, canteens, offices, products, packaging and the entire product supply chain.

Crucially, Sky is managing to achieve their plastic reductions in a cost-neutral way.

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<sup>63</sup> <https://news.sky.com/story/sky-to-remove-all-single-use-plastics-by-2020-11067415>

# EMPLOYEE ENGAGEMENT

Sky kicked off the project with an employee engagement campaign to educate colleagues on the issues of ocean plastic. They shared a vision of Sky being part of the solution, by using its position to shine a spotlight on ocean health and find innovative solutions to ocean plastic. They used film reels on screens around the office, meetings, emails, and documents to explain to employees why Sky was tackling single-use plastic and how they wanted the team to contribute to the project.

The Sky Ocean Rescue Café was opened at the headquarters in Osterley in November 2017, educating visitors and employees about the ocean plastic crisis and inspiring them to take action. The café itself is as single-use plastic-free as possible, having made changes such as swapping plastic milk bottles for milk machines and small coffee bags made from plastic for larger recyclable alternatives. It also allowed the business to pilot operational changes, such as removing single-use cups and takeaway food containers, before further rolling out to the rest of the company.

Sky's employee engagement campaign successfully created new organizational norms that were attractive, easy and convenient for their employees to adopt so new habits could stick. The business demonstrated its commitment to the project with key early changes such as introducing reusable cutlery and crockery in kitchens, removing disposables from water dispensers and canteens, and gifting employees reusable water bottles and coffee cups; sending a strong signal that single-use plastic-free was now part of the Sky culture.

Employee communications clarified that the scope of the project was to include all business areas and all direct and indirect suppliers, with the overarching goal to eliminate single-use plastic from all products and packaging, through the whole product life cycle, from component to customer. The project also incorporated business operations, catering, events, cleaning products, IT hardware and office supplies.

Sky challenged their teams to review how they were doing things in their roles, and they soon discovered that business-as-usual had been creating a lot of unnecessary waste. Employees found that making processes more efficient achieved cost and time savings as well as plastic savings. Teams were briefed on the waste hierarchy, to ensure they prioritized removing, reducing and reusing above recycling; to make sure that they weren't just swapping one unsustainable problem for another.

Employees embraced the challenge to “do the right thing.” Sky’s company ethos encourages everyone to contribute to positive change, so anyone can come up with ideas and innovations and have their efforts recognized. This inspired employees not only to act but to take the initiative to deliver against the commitment in their area of the business, which resulted in a successful combination of top-down leadership and bottom-up action, which served to accelerate change.

Employees received regular updates on how much plastic they collectively reduced, to keep the mission front-of-mind and celebrate their achievements together. Research carried out by The University of Cambridge Institute for Sustainability Leadership (CISL) in 2018 found that 92% of Sky employees said Sky’s campaign had also inspired them to reduce plastic in their personal life.<sup>64</sup>

## LEADERSHIP

A steering group comprising members of the senior management team from each of Sky’s business units, and chaired by Sky’s CEO, meet every month to progress the plastic reduction project. Their original approach was to report on every area of the business at every meeting, but they soon discovered a rota system was more productive, allowing them to deep-dive into the progress of a different business area each month, providing more time for focused discussion, issue identification and action setting. The meetings also create constructive competition between the business areas which in turn leads to greater impact.

A second tier of working groups meets more regularly to go into more detail about progress, targets, blockers and achievements allowing for effective tracking and any issues to be dealt with promptly.

## EARLY SUCCESSES

In November 2017, a new product, the Sky Soundbox, was launched with packaging that was single-use plastic-free, made entirely from FSC cardboard and paper and therefore recyclable at customers’ curbside. The design team discovered innovative ways to safely store items such as batteries, cables and remote controls within compartments in the packaging, while the internal structure of the box was designed with a small cork insert inside the lid to absorb shock and avoid the cardboard scratching the surface of the products in transit.

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<sup>64</sup> <https://skybiggerpicture.com/impact/pdf/CISL-Report.pdf>

The team found that by challenging the status quo, engaging with suppliers and going through a rigorous trial and testing phase, they were able to avoid the need for plastic. With the right messaging on the box to promote what they had achieved, they received excellent feedback from customers.

In the wider Sky business, significant annual plastic reductions were achieved in catering and events by removing single-use items such as: 500,000 plastic water bottles (eight tonnes); 4,000,000 pieces of plastic cutlery (twenty tonnes), and 2,000,000 plastic sachets (two tonnes). They also saved twenty-four tonnes by replacing plastic milk bottles with milk boxes. Meanwhile, printer paper used across their offices, previously delivered in plastic wraps, is now supplied in FSC-certified paper wrapping, with their supplier subsequently removing plastic wraps for all of its customers, eradicating almost 1,000,000 plastic wraps from their supply chain each year.

## COLLABORATION WITH SUPPLIERS

A key ingredient of Sky's plastic reduction success has been their close collaboration with external suppliers, wider industry and even competitors. In face-to-face meetings, Sky employees shared the importance of their single-use plastic-free goals, the journey they've been on, and their desire to work together to find innovative solutions to common single-use plastic problems.

Some parts of the supply chain were initially resistant as they hadn't been approached with these requests before, but in other cases, Sky's mission has galvanized suppliers to implement their own commitments to remove single-use plastic among their other clients and further up their supply chain. The drive to reduce single-use plastic has also led to other sustainable projects, such as solar panel installation among some suppliers.

In many cases, first-tier suppliers had not yet created processes to be able to provide single-use plastic alternatives, but with investment in a co-creation approach, Sky had some significant successes. Influencing second- and third-tier suppliers is more complicated, and is their focus for the final stage of the project.

A major development came in the form of a workable replacement for single-use plastic pallet wrap (cling film) previously used for moving pallets around Sky's warehouse. They now use metal cages to move multiple pallets and reusable plastic pallet lids for full pallets of Sky products,<sup>65</sup> and reusable pallet socks for part pallets.<sup>66</sup> This has saved an estimated nine tonnes of plastic annually. They are still looking for a sustainable replacement for wrapping

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<sup>65</sup> <https://loadhog.com/product/pallet-lid/>

<sup>66</sup> <http://www.palletsock.com/what-is-palletsock>

<sup>67</sup> <https://www.skyoceanventures.com/>

pallets shipped externally to retailers to save an additional 1.2 tonnes annually, as reusable options are unlikely to be returned. With this and other difficult-to-solve issues, they have turned to the Sky Ocean Ventures impact investment fund to try to come up with new sustainable innovations that can be scaled for other industries too.<sup>67</sup>

Sky keep track of their numbers and will be getting them audited later in 2019. Nevertheless, by January 2019, Supply Chain alone had removed around 154 tonnes per year of single-use plastic, the equivalent in weight of 1.5 blue whales.

Overall the business has made annual plastic savings that amount to over 300 tonnes, equivalent to three blue whales, and that number is continuing to grow.

## KEY INSIGHTS FROM SKY

- Define the scope of the plastics you are tackling in your business. Sky's project focuses on eliminating "single-use plastics," that is *all* disposable plastics intended to be used only once before they are thrown away or recycled, including bioplastics.
- It's helpful for the vision to come from the top so that all employees understand that they are expected to find innovative ways to use less plastic in their daily roles.
- Walk through your current processes and challenge the status quo before you try to change it.
- It's crucial to test alternatives to check they perform as required. It can be useful to trial changes at just one site or on one product type to prove success, and gain support, before rolling it out.
- You can achieve plastic reductions in a cost-neutral way by streamlining wasteful processes, as well as reviewing products.
- Break down the action required into manageable chunks, such as trialing changes on one product at a time.
- Familiarize yourself with the key terminology and what it really means (e.g. bioplastics, biodegradable, compostable, FSC, recyclable, etc.); this will help you avoid unintended consequences and ensure your choices have the impact you need. Sky's single-use plastic policy and toolkit outlines the hierarchy of alternatives for employees to reference.<sup>68</sup>

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<sup>68</sup> [https://skyoceanrescue.com/media/1303/sky-business-transformation-guide\\_1st-edition.pdf](https://skyoceanrescue.com/media/1303/sky-business-transformation-guide_1st-edition.pdf)



- You cannot do it alone; you need to have support internally and to get your suppliers on board for more impact along the supply chain.
- Recognize the scale of the challenge and the complexities involved, but don't let it put you off. There is always scope to make meaningful reductions, even if you can't find the perfect solution right away.
- You need to be proactive to prevent plastic from creeping back in. Sky achieved this via online training for new employees, regular warehouse checks and formal changes to procurement policy (such as the requirement to request samples to check they arrive single-use plastic-free and the addition of a check-box on procurement forms to confirm no single-use plastic).
- Share the learnings outside the business to amplify the impact.

# CHAPTER 20

## INTERNET FUSION/SURFDOME

Surfdome is one of Europe's largest online sports retailers specializing in surf, skate and snow gear and is now part of the global e-commerce retailer, Internet Fusion Group.

The company's early adoption of plastic reduction strategies has led to them being a case study for the "World Business Council for Sustainable Development;" securing a quote in the Ellen MacArthur Foundation's "New Plastic Economy" presented at the World Economic Forum; and being invited to numerous talks and events to share their expertise, including the Northern Ireland Houses of Parliament and the National Trust's "Fit for Future" conference.

### TAKING RESPONSIBILITY

In late 2014, a couple of Surfdome's directors went on a beach clean in North Devon and returned shocked by the scale of plastic pollution they had seen. They had experienced a poignant moment when they took on board the plastic waste on the beach and made the connection – their business was also contributing to the problem. They watched the film *Trashed* to learn more about the issue, which cemented their determination to reduce Surfdome's plastic footprint radically.

A large proportion of Surfdome's customers are part of the beach clean community or are very concerned with the levels of plastic affecting coastal areas where they spend much of their free time. The directors recognized they needed to support this community and also take action to reduce the plastic used within the business to lessen the chances of it ultimately becoming plastic pollution.

In early 2015, they hired Adam Hall (now Head of Sustainability) and allowed him to dedicate six months to establish a strategy for their plastic reduction project. (Don't worry if you can't allocate a dedicated resource to reducing plastic in your business for six months, by reading this book and learning from Plastic Game Changers who have gone before, you will fast-track your progress.)

## IDENTIFYING THE QUICK WINS

When I spoke to Adam in late 2018, he shared that for Surfdomo, the quickest and easiest part of the process was plotting the plastic they currently used. By accessing their business consumables file – a “live” stock take system developed to ensure they never ran out of essential packaging or stationery – he was able to quickly see how much plastic the business purchased on an annual basis, by price, volume and weight.

Plotting the business’s plastic usage figures was important for benchmarking and measuring progress. It also allowed Adam to target the quick-wins straight away, identifying the easy switches that would make a big difference and create positive momentum for the project.

Crucial to the project’s success, Adam negotiated with the board that he could ring-fence any cost savings he made reducing plastic in some areas, to cover any additional costs incurred by plastic alternatives that might be more expensive in other areas.

## A SENSE OF URGENCY

Adam decided not to get bogged down trying to achieve 100% plastic-free. Rather than delay looking for perfect solutions, he got stuck in and made quick and effective changes as soon as possible, so that each of those changes would start having an incremental positive impact, sooner rather than later.

The easiest place to start was the outbound plastic packaging that they sent to their customers, as Surfdomo had total control over this, unlike the inbound packaging that came from suppliers.

By the end of 2015, Adam had successfully eliminated 74% of disposable plastic from their operations, totaling fourteen tonnes, which he calculated was the equivalent of preventing 650,00 plastic water bottles from entering our oceans. By 2018, Surfdomo’s outbound packaging was 97% plastic-free (by weight using the government’s Packaging Producer Responsibilities assessment boundaries).

## MANAGING COSTS

The vast majority of the changes Surfdomo implemented saved money. Examples include swapping bubble wrap for recycled paper, plastic tape for gum tape, recycling printer ink cartridges and cutting business waste costs by producing less waste.

However, the biggest and most expensive change was removing the 9.75 tonnes of poly mailing bags the business sent out to customers each year. Adam used the savings made elsewhere to cover the cost of FSC recycled cardboard boxes, which were 110% more expensive than poly bags.

He also used the switch to cardboard boxes as an opportunity to team up with the non-profit #2minutebeachclean to support them and promote their eco-friendly messages to Surfdomo customers on their order packaging.<sup>69</sup>

Over the first year, the net cost of the project was just £900 for sending 2.5 million packages (the additional cost of the boxes not absorbed by other cost savings), but the customer goodwill generated by the project and the positive marketing and PR exposure was priceless.

Fast forward to 2019, and the project is now operating as a net positive because the improved recyclability of their waste is now providing the business with a new income stream, and they have fully adopted it across the wider Internet Fusion group.

The business has also recently invested in fit-to-size packaging automation to make further efficiencies, reducing cardboard usage and removing the need for paper void filling while cutting the number of lorries required by ninety a year, squarely addressing concerns over CO2 emission increases from switching to heavier packaging.<sup>70</sup>

You can learn more about the specific steps Surfdomo took to reduce their plastic packaging by referencing the “9 steps to use less plastic packaging” infographic that Less Plastic co-created with Surfdomo.

## UNEXPECTED BUSINESS BENEFITS

In addition to the operational efficiencies, Surfdomo’s plastic reduction project has resulted in some unexpected business benefits. In a recent conversation with the Head of HR, Adam learned that the plastic project is one of the main stories used during interviews to recruit the brightest talent into the company.

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<sup>69</sup> <https://beachclean.net/>

<sup>70</sup> <https://www.youtube.com/watch?v=-6W6Yt5rvMc>

Pride in Surfdomes's plastic reduction innovations has also enhanced company culture and increased employee retention because people want to work for a company with a purpose.

Surfdome's customers have been highly engaged in the campaign and supportive of the sustainable changes the company is making, because they love the outdoors and want to shop from a company that is proactively doing what it can to minimize its impact. In fact, when the company first launched the plastic reduction strategy, two-thirds of social media conversations with Surfdomes's customers centered around sustainability and the plastic strategy.

## DEALING WITH CHALLENGES

The next phase of the project was to tackle inbound plastic packaging delivered into the business by suppliers, primarily the clothing brands that Surfdomes sells.

The biggest challenge has been that clothing can be easily spoiled in warehouse conditions, by dust, damp or spillages, if it isn't protected by plastic packaging.

Adam investigated alternative options including bioplastics, biodegradable and compostable plastics, but none of the options currently available offered a more sustainable solution as there was no guarantee that they would be disposed of in the right way. If they became litter, ended up in the sea, or in a fish's stomach, they would still be as harmful as normal plastic because they require very specific conditions to break down safely.

For now, his pragmatic solution will be to stick with recycled, recyclable plastic packaging to protect clothing until the point of sending it to the customer. Then, instead of giving customers the responsibility of dealing with the plastic waste (and not having any control over whether it will be disposed of responsibly) customer orders are packaged in cardboard boxes (with paper gum tape) and the plastic packaging is kept by Surfdomes for recycling.

The current process sends used plastic garment bags to a closed loop recycling center that recycles them into new bags. An even better avenue would be to develop a reusable solution that would be more resource efficient, but at this stage, they haven't found a workable solution.

It's important to note that most businesses will come across difficult to resolve challenges. Don't let the lack of a perfect solution delay the implementation of changes that will still make a positive impact. You can come back to solve the more complex issues when you know more, or when more innovative solutions have come to market or been scaled so they are more accessible.

# SUPPLIER ENGAGEMENT

The broader scope of the project can be realized by influencing the supply chain to reduce or eliminate the sources of plastic waste generated by deliveries into the business, with the potential for suppliers to make changes that will positively impact all their customers, not just Surfdomo.

In summer 2018, Surfdomo held a brand day inviting over 750 of their suppliers to attend. They used the event to highlight business responsibility to reduce plastic pollution and share the positive changes Surfdomo had implemented in their business and insights they had learned. Many of the brands are medium-sized businesses and were keen to learn from Surfdomo's experience, valuing their expertise and guidance on what the most sustainable delivery solutions would be.

Adam launched a new Delivery Policy at the event featuring a simple traffic light system to limit the plastic packaging sent to Surfdomo that is either non-recyclable or non-biodegradable. He highlighted what packaging was unacceptable (red), acceptable (amber) and preferable (green).

When they introduced the new Delivery Policy, they took the bold step of requesting operational compliance from their suppliers within six months, with a penalty structure for non-compliance. Surfdomo needs their brands, so they were nervous imposing these new requirements, but they knew that they had done the research, created a valuable best practice guide and wanted to share it with their brands to make a bigger impact on plastic waste. They gave the brands a lot of time to comply and made it clear that the door was open for two-way discussions to resolve any issues.

The Delivery Policy has been created as a digital form via a link so that everyone works off the most up-to-date version to allow for updates and to avoid confusion.

There will never be an end-point to the plastic reduction project. There will always be new brands and suppliers who need educating, changes of management with their suppliers, new products with different supply chains, new ranges every season; it will be a continual process of education and focus. But hopefully, it will get easier as the ripple effect works and more businesses are aware of the importance of reducing their plastic footprint.

## KEY INSIGHTS FROM SURFDOME

- Don't be held up looking for perfect solutions, make easy changes first then use the positive results to drive the more difficult changes.
- Ring-fence cost savings made by removing/reducing plastic in some areas to reinvest in any more expensive plastic alternatives in other areas.
- Collaborating with suppliers is the way to make the biggest impact as it will reduce the plastic waste being delivered into your business and also have a ripple effect up the supply chain.
- Reducing plastic can result in many unexpected benefits, such as attracting the brightest talent and enhancing employee retention rates.
- There will never be an end-point to the plastic reduction project; there will always be new people interacting with the business, internally and externally, so it will be a continual process of education and focus.
- It's useful to create training and education materials and policies and procedures documents as digital versions accessible via a link so it can easily be updated.

# CHAPTER 21

## BOSTON TEA PARTY CAFÉS

In April 2018, the independent coffee chain, Boston Tea Party Cafés, announced they would ban single-use coffee cups from all their stores from 1st June 2018, becoming the first coffee chain in the UK (and possibly even the world!) to ban single-use coffee cups.<sup>71</sup>

The public response was phenomenal. On the day the news broke, it featured in newspaper stories around the world, and their article was third “most read” on the BBC news website, which also happened to be the day the new royal baby, Prince Louis, was born, so naturally, he dominated the top spots.

I spoke with Ben Hibbard, BTP’s Marketing Manager, six months later to learn more about how they implemented the project, the impact it’s had, and key insights to help people who want to reduce single-use plastic in their organizations.

### DOING THE RIGHT THING

Since its launch in 1995, BTP built its success on ethical and sustainable values. When awareness of plastic pollution started to grow, they responded quickly by removing plastic straws and plastic bottles from all their cafés to reduce their plastic footprint, but their 340,000 a year single-use coffee cup waste was the elephant in the room.

UK coffee cup figures are staggering: 2.5 billion single-use plastic-lined coffee cups are thrown away each year; of which only 0.25% is recycled, while 4% is littered, and 95.75% is sent to landfill.

Trying to minimize their contribution to the problem, BTP offered a 25p discount incentive to encourage customers to bring their own reusables, but the 2.9% take-up was too low to have any meaningful impact.

They also considered introducing compostable coffee cups, but because of the nature of takeaway drinks, coffee shops have no control over where the cup ends up. Compostable cups need to go to special composting facilities to break down safely, and there aren’t currently enough accessible facilities in the UK, so the switch didn’t seem worthwhile.

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<sup>71</sup> <https://www.bbc.co.uk/news/uk-43879019>



Looking at the reality of the situation, BTP directors concluded that the only way they could make a difference would be to break from the norm and stop using disposable takeaway cups altogether.

## TESTING THE PROCESS

BTP spent four months testing, trialing and training leading up to their public announcement in April that they would be banning single-use takeaway cups from their stores. They then had a further two months to get everything in place in time for the launch date on June 1, 2018.

The first challenge was to find the best reusable takeaway cup for customers to borrow or buy in their coffee shops. They tested many different cups for robustness (by dropping them down stairs and putting them through their dishwashers) and also for being tactile, pleasant to drink from, and not leaving behind a plastic taste.

In the end, they chose reusable cups made from sustainable bamboo, rather than plastic, partnering with Ecoffee Cup to subsidize the cups, so they were cheaper for customers, making it easier for them to get on board. The cups cost just £4.25 for an 8oz, £4.50 for 12oz or £4.75 for 16oz. As a comparison, the same cups would usually cost £9-12 from other retailers. BTP decided to sell the cups at cost because the primary purpose of the project wasn't about making money, it was about inspiring behavior change, which was more likely to happen if they removed the obstacles to adopting new reusable habits.

Next, they tested the process. They kept it simple by making the cost of borrowing a cup the same as the cost of buying one. The only difference was that customers needed to return their borrowed cups (in working order, with all the parts) to any BTP café to receive their refundable deposit.

All cups, whether to borrow or to buy, are pre-washed by BTP.

## EMPLOYEE TRAINING

BTP recognized the importance of getting employee training right. They started by ensuring employees understood the reasons behind the single-use cup ban, that the company was taking a stand against the scale of disposable cup waste and its negative impact on the environment.

Employee enthusiasm has been a very positive side effect of the project. The teams got behind the concept straight away, and managers have reported higher

levels of motivation and lower levels of employee turnover. It's also proved easier to recruit high caliber candidates into new roles. When they opened their new café in Chichester, soon after news broke of their pledge to ban single-use cups, they were deluged with applications in a town where they had been previously unknown, and were able to choose from the very best candidates.

The company has focused its training on making the process of buying or borrowing a cup as seamless as possible, with clean cups displayed prominently and signage explaining the simple process. Café staff came up with the fun idea that customers could mix and match bespoke cups with different combinations of colored cups, lids and silicone bands which has proved very popular.

BTP trained employees for conversations with customers about the changes. Most people understand why they are banning single-use cups and are very supportive, but some find it annoying or don't care, so it's been essential to prepare staff for these situations.

Four weeks before the launch they told as many customers and regulars as possible about the forthcoming changes. Most bought into the new process and bought a cup. But the company has lost the occasional drinkers. And they have lost the people who don't have or want a cup, and feel awkward about borrowing one, so prefer to buy coffee elsewhere because it is easier.

## **MAINTAINING PROFITABILITY**

The decision to ditch disposable cups represented a considerable risk to the business. Takeaway hot drinks accounted for just over £1 million in annual sales (representing 5% of BTP turnover), so their challenge was to stay profitable while taking action to be significantly more sustainable.

Early results have been encouraging although there is still lots of work to do. After the first six months, as expected, take-away hot drink sales had decreased by 24%. However, overall sales were relatively equal, which means that remaining customers were either spending a little more or have switched to drinking in rather than takeaways.

Going forward the plan is to attract more customers who are curious but unsure of the process and persuade them how easy it is to bring, borrow or buy a takeaway cup, in effect "training" customers to change their takeaway drink habits.

BTP is also planning partnership activity with office blocks and companies located near their cafés, to incentivize staff to come to BTP for their drinks and lunch. If companies buy a cup for all their employees at cost, BTP will offer their first coffee free to show them how easy the reusable cup process is to implement.

They are also going to run some campaigns to promote slowing down and enjoying a coffee (and maybe something to eat) or taking time to sit down with friends and colleagues, which is better for mental health and wellbeing too.

Of course, the sales figures don't tell the whole story. In the first six months, BTP prevented 80,000 disposable cups from going to landfill which is enough to fill an articulated lorry. This has provided lots of positive news and social media content.

The PR exposure and social media engagement have been incredible, both when the news first broke and for their regular updates. It's hard to put a monetary value on this, but it will have undoubtedly raised awareness of the company and served to enhance brand reputation and customer loyalty because they are the first coffee chain to have taken this bold step.

As previously mentioned, employee recruitment and retention have also both improved since the project rolled out, so there will be considerable savings made in recruitment and training costs.

## **GIVING BACK TO THE COMMUNITY**

Another positive aspect was the decision to donate the savings made from no longer buying disposable cup stock to local community causes, meaning that every time a customer buys a takeaway hot drink in a reusable cup, BTP will donate 10p. In the first six months, they gave more than £8,000 to local charities.

Each café has chosen the local cause they want to support, such as homeless charities, holiday clubs for underprivileged kids or beach clean organizations. There is the opportunity for these charities to use their existing corporate partners and databases to promote BTP as the place to go for takeaway coffee if they want to raise their donations.

## AMPLIFYING THEIR IMPACT

Despite their successes, BTP are not going to facilitate a cultural behavior shift, in the way we buy our coffees, on their own. They need more coffee chains to follow their lead.

Many independent coffee shops feel daunted by the prospect of reduced takeaway hot drink sales, despite the other business benefits of banning disposable cups. However, many have been inspired by BTP's bold step and have approached them for advice on implementing the ban in their shops, or attended one of their workshops sharing how they train their teams and showing that the project is relatively easy to implement once you take the plunge. BTP is keen to collaborate and share insights to accelerate change.

As primary contributors to the problem, and as the original orchestrators of the takeaway coffee culture, the coffee giants have a responsibility to ban single-use cups in their shops too. Due to their size and scale, they could prompt a seismic shift away from our current disposable society toward a more sustainable one, quickly making reusable cups the new norm. Just setting up cup recycling schemes in their shops is not good enough. They need to address the cause of the problem: using a cup once for ten minutes is a colossal misuse of resources and results in accumulating mountains of difficult-to-recycle waste. The best solution is for us all to relearn only to drink hot drinks from reusable cups because it's really not that hard.

## KEY INSIGHTS FROM BOSTON TEA PARTY CAFÉS

- Engaging and training their employees has been a critical ingredient to the success of the project because their people are passionate about it; it is likely to rub off on customers too.
- It's essential to thoroughly trial and test any changes to your processes and products to anticipate and deal with potential problems before rolling it out to customers.
- While sales figures are important, they aren't the only measure of business success.
- Cost savings achieved by plastic reductions, or side benefits (such as lower recruitment costs, lower waste costs), will result in higher overall profits.
- Challenges to maintain sales performance can lead to more creativity with marketing, partnerships and community work, which is likely to result in deeper customer relationships and long-term gains.
- Promoting the successes of the project has gained BTP valuable PR and social media exposure. Visually by representing the number of cups saved has helped people to understand the impact of the ban: 80,000 cups not gone to landfill is enough to fill an articulated lorry.
- Sharing best practice among the hospitality industry is helping to amplify the impact of BTP's hard work and will hopefully spark a widespread shift away from our disposable culture.

# CHAPTER 22

## ICELAND FOODS

In January 2018, Iceland supermarket was the first major retailer in the world to announce a pledge to eliminate plastic packaging from all of its own label products, which they committed to do by the end of 2023.<sup>72</sup>

Iceland is recognized as the UK's leading frozen food retailer and operates over 900 stores across the country, together with an award-winning online shopping service. It prides itself on offering high quality, good value fresh, chilled and frozen food and groceries.

With the grocery retail sector accounting for more than 40% of plastic packaging in the UK, Iceland hopes their groundbreaking move to eliminate plastic packaging will encourage other retailers to follow suit, or even collaborate with them so that they can achieve larger scale impact more quickly.

I spoke with Managing Director, Richard Walker, in late 2018, to understand more about their #TooCoolForPlastic campaign and catch up on the progress of their plastic reductions so far.

### RESPONSIBLE RETAILING

As a surfer, Richard has seen first-hand the problems of plastic pollution in the sea and noticed it worsening over recent years. As a father of young children, he is deeply concerned about the harm plastic causes to marine wildlife and humans as it enters our food chain. In 2016, he decided to act by presenting a bold idea to his board: to be the first retailer to cut plastic out of their own-brand packaging. As it was such a pioneering concept, it took him two years to gain the support he needed internally and the confidence that they would be able to do it, before the announcement could be made public.

Richard believes the onus is on retailers, as leading contributors to plastic packaging pollution, to do the right thing and take responsibility for the plastic waste they generate; and he is determined to make plastic-free shopping accessible to the value market. As a family business, Iceland has no shareholders to answer to, so can invest its own money into solving the problem. The business has committed not to pass on any additional costs to customers. However, as we have seen from our other case studies, plastic reduction efforts don't necessarily cost more money, and if they do, those additional costs can usually be offset by the many other business benefits derived from the project.

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<sup>72</sup> <https://www.theguardian.com/business/2018/jan/15/iceland-vows-to-eliminate-plastic-on-all-own-branded-products>

## BENEFITS OF THE PLASTIC-FREE PLEDGE

Before announcing their pledge, Iceland carried out a survey of 5,000 consumers in which 80% said they would endorse a move to go plastic-free; suggesting that plastic-free product sales would be strong. Meanwhile, the PR value achieved by the announcement was incredible. News of their pledge generated global media coverage including the front page of *The Daily Mail*, and Richard received numerous invitations to appear on TV, including *Good Morning Britain*. The Prime Minister even mentioned Iceland's plastic-free initiative in a speech to the Houses of Parliament, calling on other supermarkets to follow their lead.

The positive media attention has undoubtedly shifted public perceptions of the low-cost frozen food brand, adding a higher purpose to their positioning which will be well-received by many shoppers from all socio-economic groups, particularly millennials. Iceland's competitors are now lagging behind them on the plastic issue.

## GETTING THEIR OWN HOUSE IN ORDER

In the run-up to announcing their plastic-free pledge, Iceland management recognized there was work to be done to reduce unnecessary plastic waste generated by their Deeside head office. They identified several quick, easy changes that made a big difference straight away.

Before they went public with their plans, they stopped buying plastic bottles of water and soft drinks for their staff restaurant, meeting rooms and vending machines, replacing them with glass bottles and cans instead. Just swapping those used in meetings saved 12,000 plastic bottles a year.

They also stopped using single-use coffee cups and encouraged colleagues to buy reusable cups from their in-house Costa coffee bar, selling more than 200 in the first couple of days that they were on sale. This change saved 91,000 non-recyclable cups and lids from being sent to landfill each year.

On the morning of the announcement, every head office colleague found a refillable aluminum Iceland #TooCoolForPlastic water bottle waiting for them on their desk. The chilled water dispensing mechanism on vending machines had been specially adjusted so that the bottles and other containers could now be refilled, ending the use of disposable plastic cups in their office and saving 124,000 non-recyclable plastic cups from going to landfill each year.

## PLASTIC BOTTLE DEPOSIT RETURN SCHEME

In April 2018, Iceland became the first UK supermarket to install in-store reverse vending machines to capture plastic bottles for recycling. The scheme was initially trialed in four stores and at Iceland's head office for six months, resulting in a total of 311,500 plastic bottles being returned.

Customers were highly supportive of the machines with children playing an important role in encouraging their families to use them. The scheme has been entirely funded by Iceland and rewards customers with a 10p voucher to spend in store for every plastic bottle returned for recycling.

In January 2019, the scheme was expanded to a fifth store, Belfast, and will continue for another six months. Data from the trial will enable Iceland to assess consumer reaction to reverse vending machines and understand their potential impact on in-store operations. The findings will also be shared with DEFRA (Department for Environment, Food and Rural Affairs) to inform the ongoing consultation for a national scheme.

## PLASTIC CARRIER BAGS

In June 2018, Iceland trialed the removal of 5p single-use plastic carrier bags from tills. Due to its success, they removed single-use plastic bags from all their stores in October 2018, eliminating 250 million plastic bags a year, saving 3,000 tonnes of plastic annually.

Customers without their own bags are now offered a "bag for life" instead, made of recycled post-consumer plastic waste, or they can purchase large woven or hessian bags. Usage figures of "bags for life" are being closely monitored because they contain more plastic than the single-use carrier bags; however due to their robust design, they can be used multiple times.

Iceland recognizes that to reduce plastic bag waste, they need to encourage customers to use fewer bags or remember to bring their own bags to store. They plan to step up customer communication to encourage and incentivize customers to bring their own bags every time they go shopping.



## PLASTIC-FREE PACKAGING TRUST MARK

With over 1,400 product lines and 300 suppliers the scope of their plastic-free packaging project is enormous, which is why they have given themselves until 2023 to achieve it, although if they can do it quicker, they will.

The technology and materials for producing a diverse range of non-plastic packaging are now becoming commercially available, and Iceland's project will help to accelerate this shift further, making scalable alternatives to plastic packaging more widespread.

The overarching goal is to replace own-brand plastic packaging with paper and pulp trays, paper bags and other materials that are easily recyclable through domestic waste collections or in-store recycling facilities.

In May 2018, Iceland adopted the new Plastic Free Trust Mark developed by the campaign group, A Plastic Planet,<sup>73</sup> to revolutionize how shoppers buy their food and drink. The Trust Mark has been designed to empower consumers, making it easy for them to make informed choices on sustainable packaging.

Iceland became the first major retailer to implement the trust mark on its plastic-free product packaging, starting with its own-brand eggs, cottage pies and vegetable burgers, delivering an annual plastic reduction of 600 tonnes per year for eggs alone.

Accredited packaging will include carton board, wood pulp, glass, metal, and certified compostable biomaterials.

You can find out more about A Plastic Planet in the Resources section of this book.

## COMPOSTABLE PACKAGING

Iceland supports the use of certified compostable packaging for food because it makes sense to dispose of it along with other naturally compostable organic kitchen waste during the food preparation process. If compostable waste reaches the home compost bin or is collected for local or industrial composting, as well as tackling pollution issues, we can address the soil fertility crisis by returning nutrients to the soil instead of throwing them away as waste.

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<sup>73</sup> <http://aplasticplanet.com/>

There is a new wave of innovative start-up companies around the world producing high quality, fully compostable packaging. Rather than being made from finite fossil fuels, they are made from renewable biomaterials that can be grown again and again, such as seaweed, trees, corn and sometimes even waste food products such as tomato stalks or avocado seeds. These innovations boost farmers' productivity by utilizing marginal agricultural land and providing a market for waste matter from crops, while also addressing the plastic waste crisis.

As discussed in Chapter 6, the key challenge with compostable packaging is that most of the options currently available can only be properly composted if sent to a high heat industrial composting facility. If they escape into the environment, they act in the same way as standard plastic, because they require the right conditions to break down safely.

Therefore, Iceland is lobbying the UK government to implement mandatory food waste collections for every household in the UK, to capture the resources in our food waste so they can be returned to the soil rather than going to landfill. They also recognize the need for consumer education and a simple label from the packaging industry that clearly indicates whether a piece of packaging should go into the plastic recycling bin, the landfill bin, or the composting food waste bin, to avoid confusion.

## **COLLABORATION WITH SUPPLIERS**

The only way Iceland can make their ambitious plastic-free packaging goal a reality is by working closely with their 300+ own-brand suppliers to find suitable alternatives. Each switch requires a substantial testing phase to make sure the replacement materials perform as required for food-grade, health and safety, and food preservation purposes, as well as testing what happens to the packaging when it becomes waste. Iceland is determined to avoid unintended consequences that end up transferring the problem somewhere else.

Alternative packaging materials need to come from sustainable sources and be fully recyclable at the end of their life. The challenge is to find cost-neutral solutions that maintain or improve shelf life and have no adverse impact on food waste, while preventing plastic waste from escaping into the environment.

## KEEPING ACCOUNTABLE

Iceland kicked off the project by plotting their current plastic usage to provide benchmark figures, enabling them to measure their success and also identify the key areas that needed to change.

Their target was to remove all single-use plastic from own-brand packaging by 2023, equating to 13,000 tonnes. They are monitoring and openly reporting progress on their website and have committed to publishing a plastic reduction progress report at the end of each year.

Going public with their pledge has been a great way to keep accountable and focus the internal team on the issue. Although the pledge came from the top, the whole business is engaged in the project: buyers, marketing, packaging, supply chain, everyone is involved and responsible for cutting plastic as part of their everyday roles. There is no special “plastic-free team” to deliver the change; it is a true team effort.

## SUCCESSSES AND CHALLENGES – YEAR ONE

One year after making their pledge, Iceland had reduced or removed plastic packaging across eighty-one lines. The team achieved this by working closely with existing and new suppliers to find innovative solutions across the supply chain.

They aimed to replace all of the 100 million black plastic non-recyclable trays with board-based trays made from FSC sustainable sources, saving 2,000 tonnes of plastic per year. They had agreements in place with all suppliers by the end of 2018 but due to production challenges had only switched 50% of the range by the end of the first year. They are projected to eliminate 100% of the black plastic trays by late 2019.

They replaced plastic bags on bananas with recycled and recyclable paper bands, saving ten million plastic bags a year, equating to fifty-seven tonnes.

They switched lemons from plastic packaging into cellulose bags with a paper label.

They already used paper bags for some potato ranges and tested the feasibility of using these more widely, subject to supplier packing capabilities in the short term.

They explored non-plastic alternative packaging for onions and other products, including citrus fruits which are typically packed in plastic netting.

They continued to evaluate alternative materials for black plastic meal trays including sugar beet, bagasse (from sugar cane) and bamboo; they worked on eliminating plastic laminate; and they trialed cellulose films and translucent paper-based alternatives to replace plastic film on their packaging.

They also launched a plastic-free greengrocer trial in their North Liverpool Food Warehouse store, offering customers the opportunity to buy thirty-five lines of fresh produce loose (unpacked), and twenty-seven produce lines in plastic-free packaging. Loose fruit and vegetables were offered at cheaper prices than pre-packed equivalent to encourage uptake.

In other areas, they experienced greater technical challenges. New technologies and materials are developing fast and Iceland's pledge will inevitably help these innovations come to market quicker, but in the meantime, it is a case of finding solutions that are able to be scaled straight away.

Because Iceland is the first retailer in the world to commit to this, they face the additional hurdle of going against the established system. For example, the dairy industry has invested heavily in a plastic bottling system that uses the same specifications and technology across the board, so it's not easy to make the switch to returnable glass milk bottles; but it's not impossible. They are exploring a number of potential alternatives for milk containers to significantly reduce plastic waste.

By the end of year one, Iceland had successfully removed 3,000 tonnes of plastic from the business (1,500 tonnes of food packaging and 1,500 tonnes from carrier bags).

## **NEW PRODUCTS**

As well as reducing plastic in their packaging, Iceland has begun to target products that contain plastic themselves. In late 2017, they stopped selling plastic straws; and in August 2018 they became the only supermarket chain in the UK to sell plastic-free chewing gum.

It is estimated that 95% of the UK's main shopping streets are gum-stained, while local councils spend around £60 million each year cleaning it up.<sup>74</sup> Simply Gum is made from all-natural ingredients and is naturally biodegradable, making it better for the environment. Iceland decided to offer plastic-free chewing gum as part of its initiative to provide shoppers with easy ways to reduce their plastic footprint.

# BEYOND OWN-BRAND PACKAGING

Iceland is working on using its buying power to encourage several major brands to eliminate single-use and non-recyclable plastic too, through collaboration and sharing best practice.

The retailer also ensures they are not contributing to plastic pollution derived from agriplastics in their supply chain. Plastic sheets are often used to protect crops or suppress weeds, and some producers bury them in the soil, abandon them in fields or dump in waterways. Iceland's producers are all Global GAP or GRASP accredited which ensures good agricultural practices, including environmental protection; workers' health, safety, and welfare; and responsible disposal of waste materials.<sup>75</sup>

Another important area where supermarkets can make a difference is by working with fish suppliers applying best practice to reduce the amount of abandoned, lost or discarded fishing gear ("ghost gear") entering the ocean and threatening marine life; and requesting alternatives to polystyrene for storing and transporting freshly caught fish. This is also high on Iceland's agenda; they are looking into ways to monitor their fish supply chain.

## RIPPLE EFFECT

Working with over 300 suppliers to remove plastic from their own-brand packaging is already creating a ripple effect of positive change within their industry.

Every time they find a workable solution for each product line, it's not just a "win" for Iceland, but a plastic-free packaging option that suppliers can offer their other retailer clients, which they will be able to adopt more easily, quickly and cheaply than if they were starting from scratch.

Iceland is keen to collaborate with other companies to accelerate this shift. They believe the plastic-free project goes beyond retailer competitiveness because it is in everyone's interests to stem the flow of plastic pollution to our oceans by making plastic-free packaging mainstream as soon as possible.

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<sup>74</sup> <https://www.sas.org.uk/plastic-free-communities-2/>

<sup>75</sup> [https://www.globalgap.org/uk\\_en/](https://www.globalgap.org/uk_en/)

# COMMUNITY ACTIVISM

In 2018, Iceland Foods Charitable Foundation (IFCF) and the leading national marine conservation charity Surfers Against Sewage (SAS) announced a new two-year partnership to grow the Plastic Free Communities movement across the UK, together mobilizing 100,000 community volunteers.<sup>76</sup>

The partnership will expand SAS's Plastic Free Communities work across coastal, rural and urban areas throughout the UK and support their The Big Spring Beach Clean: Summit To Sea events in April 2019 and 2020. This will be the first time the "Clean" series has incorporated mountain and street cleans alongside river and beach cleans.

## KEY INSIGHTS FROM ICELAND

- As major contributors to plastic pollution, retailers have a responsibility to address the amount of plastic waste they generate by working hard to find more sustainable alternatives, that don't shift the problem elsewhere.
- Making their pledge public provided the retailer with substantial high-value press and media coverage.
- Although the pledge came from the top, everyone in the business is responsible for reducing plastic in their roles. The public nature of the pledge keeps them focused and accountable to ensure they deliver what was promised.
- Reducing disposable plastic in head office, canteens and vending machines sends a signal to employees that you are serious about the project and also helps generate positive momentum for the project and some early quick-wins.
- Working closely with suppliers is crucial, explaining why you are making the changes and then thoroughly testing and trialing the alternatives to ensure they meet the necessary standards. This will result in some very creative solutions, rather than just doing things the way you always have.
- There are many challenges from being the first and trying to change a system that is very ingrained, but it is also exciting and empowering for the teams and they know they are making a big difference with their pioneering work.

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<sup>76</sup> <https://www.bbc.co.uk/news/uk-39599329>

- Emerging innovations may not be scalable straight away. Do the best with what's available, while exploring whether new technologies would come to market more quickly with your support.
- The ripple effect of the positive changes will be far-reaching through the supply chain and among other retailer clients too.
- Collaborating with other retailers would accelerate progress for everyone; they are eagerly awaiting other major supermarkets to get on board.

# CHAPTER 23

## DAMERS SCHOOL

The children at Damers First School in Dorset, UK have taken incredible steps to reduce plastic in their school and wider community, while also campaigning for legislation to reduce plastic at a national level.

In March 2019, I interviewed Edd Moore, Year 3 Teacher and Eco Coordinator at Damers, to discover how they had tackled plastic in their school (educating four- to nine-year-olds) and to hear about the broader positive impact they'd had on their community.

### UNDERSTANDING THE ISSUE

Their journey began in September 2017, during National Recycling week, when an environmentalist was invited to the school to talk to the children about the problems caused by plastic pollution.

The children were shocked to learn that globally we produce over 300 million tonnes of plastic every year, with over 8 million tonnes of it ending up in our oceans. Shortly after the visit, a concerned group of children approached Edd to ask what they could do about the plastic crisis.

### BRAINSTORMING IDEAS

They sat down together and came up with ideas for how they could make a difference to reduce single-use plastic in their school and their local town.

One of the first projects they embarked on was a letter writing campaign to local businesses to persuade them to sign up to Refill Dorset, a scheme that discouraged single-use plastic water bottles by convincing businesses to offer free tap water refills, promoted by window stickers and the nationwide Refill app.

The children followed up their letters with face-to-face pitches to business owners and managers, successfully convincing twenty-three businesses to sign up in just one afternoon!



## CREATING MOMENTUM

From there, progress snowballed. They received support from the local mayor, and their success achieved lots of local publicity, which in turn led to more businesses signing up. CBBC *Newsround* even heard of their project and came to film the children in action.<sup>77</sup>

More opportunities arose, including mentoring other schools and other towns to encourage them to make changes too. The children outlined the steps they'd taken, and the teachers stepped in to organize the meetings for them to share their experiences.

## BUILDING ON SUCCESSES

Back at school, they decided to become a TerraCycle collection point for difficult-to-recycle items – such as biscuit wrappers, pet food pouches, and toothpaste tubes; and in the first year, succeeded in raising £1,000 for the school which they used to build a new bird hide.

They also partook in the National Young Enterprise Fiver Challenge and decided to develop a new eco-friendly product to replace single-use cling film in lunch boxes. The children produced handmade beeswax wraps, called *Waxtastic No Plastic*, and sold them at school, farmers markets, the Dorset Show, Poundbury Food and Arts Festival and the summer fair. They made £4,100 profit which they used to develop a nature area and a pond.

## A PROJECT DRIVEN BY THE CHILDREN

The children's passion and enthusiasm have been key to their success, encouraging teachers, parents and the wider community to support them. Environmental topics are embedded in the curriculum right the way through the school, so they learn from a young age how important it is to protect nature, and have been keen to live up to this with their actions.

Many parents commented on how beneficial it was for the children to have the opportunity to build their confidence by networking with and presenting to adults, from face-to-face meetings to a roomful of over sixty business owners at the local chamber of commerce meeting.

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<sup>77</sup> <http://www.bbc.co.uk/newsround/42885663>

## REFUSING TO TAKE “NO” FOR AN ANSWER

Next, they set themselves the challenge of becoming a Surfers Against Sewage “Plastic Free School.” As part of this goal, the children identified suppliers who were delivering unnecessary or excessive plastic to the school and wrote letters requesting that they stopped.

The standard response was that plastic was too hard to remove, or necessary to prevent food waste. However, the children refused to take “no” for an answer, persevering until they wore down the resistance.

Eventually, the fruit supplier agreed to use Damers School as a trial for delivering fresh fruit in reusable crates without plastic packaging, if the children would monitor any increase in damaged fruit. The children were excited to be given this task and enjoyed counting out the fruit while inspecting the quality. Their analysis revealed that loose fruit actually reduced food waste as they only handed out what was wanted and there had been no noticeable increase in damaged fruit. They hope their findings will convince the supplier to roll out loose fruit to other schools, to maximize the impact.

They also successfully convinced their milk supplier to switch from plastic cartons to glass bottles, which they have made available to other schools, although they don’t advertise the fact, so it’s up to schools to request plastic-free milk.

By May 2018, Damers had achieved SAS Plastic Free School status thanks to:

- Organizing a “Trash Plastic” event to raise awareness of the problems of single-use plastic and ideas of reusable alternatives.
- Launching waste-free lunch awards to incentivize children to bring more eco-friendly lunches to school.
- Replacing plastic spoons provided for yogurts with reusable stainless steel spoons.
- Promoting the use of reusable bottles for all children.
- Convincing their fruit supplier to deliver loose fruit instead of plastic packaged fruit.
- Persuading their milk supplier to deliver in glass bottles instead of plastic cartons.
- Inviting their local MP, Sir Oliver Letwin, to come to the school and hear about all the changes they’d made.

Over one school year, they saved 25,560 plastic cartons and straws and 3,240 plastic fruit and vegetable bags from going to landfill.

## EXTERNAL RECOGNITION FOR THEIR EFFORTS

The people from Campaign to Protect Rural England (CPRE) and Sir Oliver Letwin MP were so impressed by the children at Damers that they offered to arrange for a group to visit Parliament and meet the Secretary of State for the Environment, Michael Gove, early in 2019 to discuss the Bottle Deposit Return Scheme.

The children went to London to urge the government to hurry up with implementing the scheme for bottles and cans of all sizes in England, due to its proven success in reducing plastic litter in Scotland and many other countries around the world. The children again appeared on CBBC *Newsround*.<sup>78</sup>

Representatives from the school will be returning to the Houses of Parliament for an afternoon tea to celebrate being shortlisted, for the second year in a row, in *The Times Educational Supplement Magazine* “National TES School Awards” (regarded as the Oscars of teaching!) in the Sustainable Schools Category. They will also be attending a prestigious Awards Ceremony at Grosvenor House Hotel, Park Lane, London to celebrate their achievement and find out if they have won their category.

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<sup>78</sup> <https://www.bbc.co.uk/newsround/47404939>

## KEY INSIGHTS FROM DAMERS

- Start with education around the issues to ignite passion and enthusiasm that will drive the project through the tough times.
- Significant change is equally possible when it comes from the bottom-up as when it comes top-down. The changes made by Damers School were completely driven by the children. They were also lucky to have the support of their teachers to help organize and implement the plan both inside and outside of school time.
- Never underestimate the power of perseverance. Politely refusing to accept “no” for an answer opened up opportunities for dialogue, collaboration and innovation.
- Events offer a great way to raise awareness of the issues and to raise funds. They are also lots of fun.
- There are many side benefits to running a project to reduce plastic in your school. The children at Damers have been empowered by the success of the project while gaining invaluable experience from speaking to business owners, politicians, and the media. They’ve developed confidence and the firm belief that they can make a difference, both in their school and beyond.



# AFTERWORD

For centuries our dominant cultural paradigm has been rooted in the belief that nature was limitless and humans could exploit and profit from it endlessly. Today we know this was an illusion. Since the industrial revolution, the pace of ecological devastation has increased exponentially. We drill, mine, burn, pollute, deforest, overfish, and drive to extinction species we've not even discovered yet. We are so lucky to inhabit this beautiful, living planet; but it can only take so much before it stops sustaining life. Will we realize the value of our natural fortune before it's too late?

Even if humans were clever enough to invent ways to survive in a world devoid of nature, would you want to live there? A planet made of concrete, plastic, and steel is no match for the captivating beauty of untamed natural habitats. Sadly, there are very few wildernesses left on our once uncharted Earth. And those remaining have not escaped human touch, due to the omnipresence of plastic pollution.

It's often referred to as a "gateway environmental issue," but plastic pollution is just a symptom of our destructive obsession with growth. Rampant consumerism is literally eating our future. And this is not a concern for unknown distant descendants. People alive on Earth today will face the consequences, in fact some are already directly suffering from this greed. We are recklessly damaging the finely balanced ecosystems that provide us with the only things we really need: clean air, food, and water. We're squandering life's essentials for the sake of the latest must-have fashion fad, or a few more zeros in the profit columns of our spreadsheets.

Given the finite nature of our planet, we have to accept that economic growth *will* come to an end. The unknown element is whether we will change course in time to manage degrowth<sup>79</sup> in a controlled way or have it forced upon us suddenly in the form of a natural disaster of catastrophic proportions. And in case you are wondering, the solution isn't to switch from one form of consumerism to a "greener" version; we are going to have to radically transform everything, first by learning to live with fewer material things.

The late economist and poet, Kenneth Boulding, offered insights on how to navigate away from GDP, in an observation he made in 1973 that feels more relevant than ever today:

"The troubles of the twentieth century are not unlike those of adolescence; rapid growth beyond the ability of organizations to

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<sup>79</sup> <https://www.degrowth.info/en/what-is-degrowth/>

manage, uncontrollable emotion, and a desperate search for identity. Out of adolescence, however, comes maturity in which physical growth with all its attendant difficulties comes to an end, but in which growth continues in knowledge, in spirit, in community, and in love; it is to this that we look forward as a human race. This goal, once seen with our eyes, will draw our faltering feet toward it.”

As our window of opportunity for disaster-prevention narrows, Boulding’s assessment offers an optimistic glimpse of how we could thrive in a post-capitalist world, by replacing today’s unsteady economic growth with a more stable, fulfilling and meaningful existence that prioritizes growth in knowledge, spirit, community, and love.

Our situation poses both an opportunity and a threat for today’s organizations. Be a leader who transforms your business model to become fit-for-purpose for the twenty-first century; or fail to adapt in time and suffer a spectacular fall from grace. The Yellow Pages’ failure to adapt to the internet; Kodak’s failure to embrace online photo sharing; Blockbuster’s failure to pivot when subscription-based streaming emerged; these downfalls will be eclipsed by the collapse of companies, political systems, and entire economies if they fail to adapt to a world where we cannot afford to use any more of nature’s life-giving resources.

So how can your organization rise to this stretch-challenge – beyond plastic reduction – of living within the limits of the natural world?

Let’s say you sell surfboards, wetsuits, and other surfing paraphernalia. You can make a deliberate shift from selling physical products destined to end their days in landfill, to selling the thrill of catching a wave along with the identity of belonging to the surfer community. Most successful brands already use this approach to sell their products, but the main difference with this model is that your business will maintain ownership by offering rentable, returnable, reusable, repairable, closed-loop recyclable products and packaging; so you, the organization, will be responsible for recouping and repurposing materials at the product’s end-of-life.

Rather than making a series of one-time purchases from a variety of companies to meet their surfing needs, your customers will invest in long-running relationships with your company, paying via a membership model, but never owning your stuff. If you like, you can add bolt-on related services such as surf lessons, instructor training, surf photography, social events, surf competitions, and so on. You will experience a different kind of growth; one of

knowledge, skills, experiences, and relationships. Money will still flow, but the reality is you will earn less. This is the goal that capitalist thinking cannot grasp. You will need less money because you won't be filling your life with superfluous "stuff."

As a customer, you will choose loyal relationships with companies that lease you what you need, just for the time you need it, so there is nothing to go to landfill when you've outgrown it. No need for a big house to contain all your things. Nor the requirement to work endless hours in a job you hate to pay for things you don't need. Your time and money will be invested instead in the experiences you crave to live a fulfilling life. You'll also learn essential skills such as growing your own food (even if you have no land),<sup>80</sup> and mending things.

Some forward-thinking companies are already exploring this shift, although the transformation isn't coming nearly quickly enough. IKEA's head of sustainability famously said in 2016 that the West had reached "peak stuff" and that the furniture company would be testing rentable, returnable, repairable home furnishings that change and grow with their customers through their different life stages.<sup>81</sup> The goal is to shift from mass consumption to mass circularity. We need more organizations to take up this vision; to be bold and seize the opportunity to do things differently, and quickly, because the clock is ticking.

Meanwhile, companies like IKEA must resist the urge to compensate for stagnant sales in their traditional markets by creating new consumers in the developing world, causing further environmental destruction with no tangible increase in human happiness. Developed countries have discovered that chasing material wealth has made us miserable. Consumerism exploited our superficial desires to demonstrate status through the accumulation of possessions, forcing us to work longer and harder to pay for them, while distancing us from our families and communities. The result has been an epidemic of loneliness, crime, addictions, and mental health issues; social afflictions that can't be cured by any amount of retail therapy.

The rise in popularity of decluttering and minimalism is another symptom of excessive consumerism. People are waking up to the fact that owning too much "stuff" is a burden, both mentally and financially, and they are looking for ways to extricate themselves by downsizing and simplifying their lives. Smart organizations will pivot quickly to replace physical products with service solutions, experiences, or ways to connect with your community or restore nature to make a positive contribution to the world.

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<sup>80</sup> See Rob Greenfield's inspiring food freedom experiment: <http://robgreenfield.tv/foodfreedomintro/>  
<sup>81</sup> <https://www.theguardian.com/business/2016/jan/18/weve-hit-peak-home-furnishings-says-ikea-boss-consumerism>



I'd love to see a mainstream shift of people spending their time and energy on meaningful pursuits that are of benefit to people and planet, which comes with the welcome side effect of making themselves happier too. We need to wake up to how the powerful interests driving our consumer economy manipulate us. Instead of switching off, zoning out and allowing ourselves to be mere cogs in their capitalist machine, we must work hard to cultivate feelings of "being enough" and "having enough" which will be rewarding for ourselves, society and nature.

I'd love to see organizations deciding it's time to change; voluntarily halting their planet-destroying practices while compensating for previous damage done by striving for a net positive impact, that is, giving more back to nature and society than they take.<sup>82</sup> We've reached a crossroads where nature's balance cannot be restored by passive inaction alone; it will take deliberate intention, time, and effort to nurture it back. But it will be so worth it. Dedicating space for wild areas to thrive has been proven to solve the many interconnected issues of the ecological crisis we face, from biodiversity loss to climate change.<sup>83</sup> It shouldn't surprise us that nature, having thrived for millennia, knows more about restoring the ecological balance than we do.

And if you'd allow, I'd love to prescribe for you a minimum of one hour every week alone in nature; whether it's for a simple stroll in a garden or park; a riverside walk; or a trip to enjoy forest, mountains or coasts. I say this because being outside in nature is good for you and is proven to have multiple physical and mental health benefits.<sup>84</sup> But I also recommend regular time alone appreciating nature with an ulterior motive in mind. I know from personal experience that we can get so caught up in our daily lives that we feel a false sense of separation from the natural world. This is how we have allowed nature's destruction to happen in the relative blink of an eye.

To ward against complacency in future, we need to make time to regularly leave behind the virtual reality on our screens so we can rediscover how much we love the *real* world; reviving our fascination with the innumerable enchanting intricacies of nature. Rebuilding this relationship will reconnect us to the force on which our existence depends, inspiring us to do everything in our power to protect it.

My greatest hope for this book is that it lights a fire within you; compelling you to look for ways to tread more lightly on the earth with everything you do; and that together our collective energies will spark a planet-saving revolution.

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82 <https://www.forumforthefuture.org/net-positive>

83 <https://www.rewildingbritain.org.uk/rewilding/>

84 <https://www.sciencedaily.com/releases/2018/07/180706102842.htm>



# RESOURCES

I have listed here some resources that will help you implement your plastic reduction project in your organization as well as tackling plastic usage in your personal life.

## ADDITIONAL RESOURCES FOR THE 5 PS

The infographics we have developed at Less Plastic are useful for the “Picture” step as they help visually raise awareness of the issues with plastic pollution and the practical steps we can take, as individuals and as organizations, to tackle it.

They are available as portrait posters (print-ready files or ready-printed posters) or square jpegs for digital use. You can see our full range here: [www.lessplastic.co.uk/infographics/](http://www.lessplastic.co.uk/infographics/)

I have also created some free templates to help you, and your colleagues, work through the 5 Ps as you implement Plastic Game Changer in your organization, including:

- Plot Form
- Pledge Card
- Plan of Action
- Results Capture Form
- Success Vision

You can download your free copies here: [www.plasticgamechanger.com/resources/](http://www.plasticgamechanger.com/resources/)

## RECOMMENDED WEBSITES

- **Less Plastic:** [www.lessplastic.co.uk](http://www.lessplastic.co.uk)  
Inspiration, tips, and strategies to help you use less plastic in your personal life and professional role.
- **Surfers Against Sewage:** [www.sas.org.uk](http://www.sas.org.uk)  
A grass-roots movement campaigning to tackle plastic pollution and protect coastlines for all to enjoy safely and sustainably.
- **Plastic Oceans:** [www.plasticoceans.uk](http://www.plasticoceans.uk)  
One of the first charities dedicated to raising the alarm about plastic pollution globally, including via their powerful film *A Plastic Ocean*.

- **Plastic Pollution Coalition: [www.plasticpollutioncoalition.org](http://www.plasticpollutioncoalition.org)**  
A global alliance of individuals, organizations and policymakers working toward a world free of plastic pollution.
- **A Plastic Planet: <http://aplasticplanet.com/>**  
Igniting and inspiring the world to turn off the plastic tap. Founded by two pro-business, collaborative entrepreneurs that want to accelerate the pace of essential change.
- **Mission Blue: [www.mission-blue.org](http://www.mission-blue.org)**  
Set up by Dr. Sylvia Earle to ignite public support for a global network of Marine Protected Areas – Hope Spots – and to inspire action to explore and protect the ocean.
- **5 Gyres Institute: [www.5gyres.org](http://www.5gyres.org)**  
Empowering action against the global health crisis of plastic pollution through science, art, education, and adventure.
- **The Ellen MacArthur Foundation: [www.ellenmacarthurfoundation.org](http://www.ellenmacarthurfoundation.org)**  
Inspiring a generation to rethink, redesign and accelerate the transition to a circular economy.
- **City to Sea: [www.citytosea.org.uk](http://www.citytosea.org.uk)**  
A non-profit campaigning organization preventing plastic pollution at source by connecting our actions to our oceans.
- **Everyday Plastic: [www.everydayplastic.org](http://www.everydayplastic.org)**  
An experiment revealing how much plastic the average UK person generates in just one year, and how little of it is genuinely recycled.
- **Plastic Freedom: [www.plasticfreedom.co.uk](http://www.plasticfreedom.co.uk)**  
Brilliant selection of plastic-free products, including plastic-free swaps for hair and beauty products that don't compromise on results, all in one huge online plastic-free store.
- **A Life Without Plastic: [www.lifewithoutplastic.com](http://www.lifewithoutplastic.com)**  
One of the first online stores to offer plastic free products and also a blog providing plastic free inspiration, since 2006.
- **Package Free Shop: [www.packagefreeshop.com/](http://www.packagefreeshop.com/)**  
Founded by Trash is for Tossers, Lauren Singer, selling sustainable, green, eco-friendly, plastic-free products to help you live a zero waste, minimalist, low impact lifestyle.

## FURTHER READING

*Turning The Tide on Plastic*, Lucy Siegel

*No. More. Plastic.*, Martin Dorey

*How to Give Up Plastic*, Will McCallum

*Plastic: A Toxic Love Story*, Susan Freinkel

*Zero Waste Home*, Bea Johnson

*Prosperity Without Growth*, Tim Jackson

*Doughnut Economics*, Kate Raworth

*Feral*, George Monbiot

*The Overstory*, Richard Powers

*Cradle to Cradle*, Michael Braungart, William McDonough

*Our Iceberg is Melting*, John Kotter

*Atomic Habits*, James Clear

*Nudge*, Richard H. Thaler, Cass R. Sunstein

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I couldn't have written this book without the support and encouragement from my family, friends, peers, mentors, partners, clients and online followers. Back in 2015, when I first set out to educate myself on ocean plastic, the Plastic Pollution Coalition's excellent website was my first port of call, so it was a great honor to meet one of its founders, Dianna Cohen, two years later at an event in London. We have kept in touch since, and I thank her for her inspiration and for encouraging me to write this book.

I was also lucky to meet Hugo Tagholm of Surfers Against Sewage in the early days of Less Plastic, at an Eden Project event in Cornwall, which led to some collaborations, culminating in his agreement to write the foreword for this book. Thank you, Hugo, for lending your energy and creativity to provide a rousing start to my book! Another fortuitous meeting at that event was Adam Hall of SurfDome, whose brilliant presentation on how he had reduced plastic packaging across his business planted the initial seed that grew into this book. Thank you, Adam, for so generously sharing your time, invaluable experience, and insights that made this book possible.

I'd also like to thank the other real-world Plastic Game Changers featured in this book: Vicki Flaxten of Sky, Ben Hibbard of Boston Tea Party Cafés, Richard Walker and Hilary Berg of Iceland Foods, and Edd Moore of Damers School. You all agreed to share your stories without a moment's hesitation; proof that plastic reduction truly is a collaborative topic, and plastic pollution is something we all want to fix. I know your insights will empower others to make game-changing reductions to add to your own.

Thanks also to Daniel Webb of Everyday Plastic for embarking on an experiment which highlighted how much of our everyday plastic waste is not recycled, and for allowing me to include it in my book. Thanks also for your generous words of support. I'd also like to thank Jo Ruxton, for creating the spectacular film *A Plastic Ocean* which Sir David Attenborough described as "the most important film of our time," and for your valuable feedback that enhanced this book, as well as your words of support.

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Another David I am even more grateful to personally is Dave Reynolds, my mentor. Over the last five years, I've benefited immeasurably from the wisdom and business acumen you've shared with me over FaceTime. In particular, thank you for keeping me accountable when I was writing the first draft of this book. I would never have finished if I didn't care that you would be wondering where the next installment was! I look forward to meeting in person, for a change, to celebrate the book's release.

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Nina Parkins has been a good friend since our days working together in London in the early 2000s; back when we didn't think twice about single-use plastic (I wish we knew then what we know now). An extremely talented graphic designer, Nina has been intrinsic to the success of Less Plastic: creating the brand identity and accepting with good humor the numerous infographic briefs I've bombarded her with; often in languages neither of us understood. And most recently she created the cover design and interior images for this book. Less Plastic wouldn't be what it is today without you, Neen, I am so very grateful for everything you have done!

Scot Baston is a brilliant photographer and website designer, who I met just a few months after moving to Devon when I was setting up as a freelance marketing consultant and was looking for some "virtual colleagues." He has become a good friend, and when I decided I needed a website for Less Plastic, his skills became indispensable. I've lost count of the number of times you have saved me from a tech emergency! Thank you for your unfailing patience.

I'd also like to thank my "accountability partner" Marissa Walter for her support, insights, and wisdom when it comes to business and life; as well as for sharing her experiences on successful self-publishing, having written two books of her own. As one of them is a brilliant gratitude journal for kids, it seems fitting for me to be sitting here now typing about how grateful I am for your friendship.

Finally, I'd like to thank all my other friends who have stuck with me through my months of being a recluse since I embarked on this book. I look forward to becoming reacquainted this summer! Thanks also to my brother, Nick, who was the first of us to carve a career in the environmental sector. You inspired me to search for a way to make my work more meaningful too. Thanks to my Mum and Dad for your constant love and support, for all the opportunities you have given me in my life, and for moving to beautiful Devon, which inspired us to eventually follow. It's good to have you in our daily lives. Last, but not least, thank you to my boys, Will and Ollie, and my husband and soul mate, James, for putting up with the inevitable sacrifices of my time while writing this book and supporting me in so many ways. I love you more!



# AUTHOR BIO



Scot Baston, Zooming Feet Photography

Amanda Keetley founded Less Plastic in 2015 to raise awareness of the growing issue of plastic pollution and what we can do to tackle it. She has brought the “less plastic lifestyle” to a wide audience via her blog, infographics and social media following, inspiring individuals, businesses, schools, and organizations to use less plastic.

She delivers regular talks and workshops to organizations of all sizes, sharing practical tips to reduce plastic as an individual, as well as her 5Ps framework to become a #PlasticGameChanger in the workplace for a far-reaching impact that delivers long-lasting change.

In her spare time, she organizes monthly community beach cleans and leads her local Surfers Against Sewage #PlasticFreeCommunities campaign in her hometown in Devon, to encourage local businesses to find alternatives to single-use plastic. She also loves dog walks, yoga, kayaking, snorkeling, learning how to grow food in her back garden, and spending time with family and friends. You can find her on Twitter, LinkedIn, Facebook and Instagram at @LessPlasticUK and @AmandaKeetley, and learn more about her work at [www.lessplastic.co.uk](http://www.lessplastic.co.uk).

If you've enjoyed reading *Plastic Game Changer*, it would mean a lot to Amanda if you could take a few minutes to leave a review on the Amazon website, so that other readers are more likely to discover the book too. Thank you for your support.









