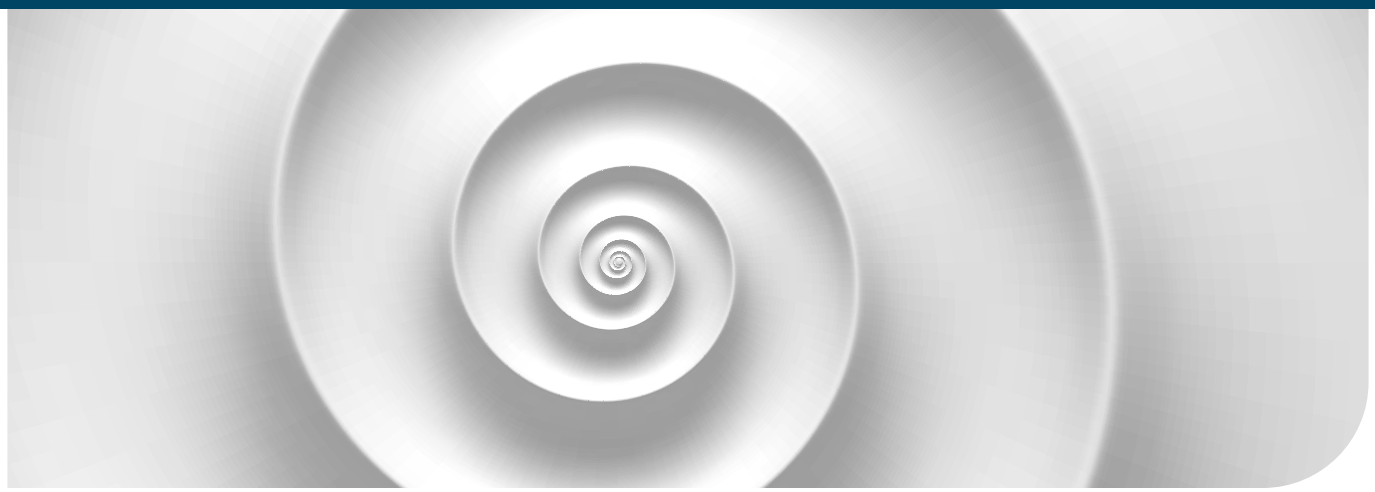
Reconomy

Going full circle to achieve zero waste

White paper



Going full circle to achieve zero waste

Society is growing at such a rapid rate and the knock-on effect is the damage being caused to the planet. There is a genuine threat of unprecedented environmental crisis if radical and immediate action isn't taken.

Earth is home to millions of species yet only Humans produce waste. Phrases such as climate emergency and extinction rebellion are all hitting the media headlines and the reason is that scientists are now suggesting that we may be heading towards a number of critical tipping points in the global climate system. There is a politically agreed global target to limit the global average temperature rise to 1.5°C. Anything above this is likely to lead to irreversible damage.

The world is seeing the adverse effect waste is having on this temperature and is starting to uncover ways to design it out of society. Within the waste industry, the term resource is being used much more universally now to describe what we previously referred to as waste. This is a positive step that demonstrates an awareness that waste is a material that holds value – and that value simply needs unlocking. The way to unlock its value is to work towards a circular economy which is a regenerative system that optimises the resources we use to keep them in a productive loop for as long as possible, avoiding waste from being generated entirely.

Reinventing a tried and tested approach

Think back 50 years and there were excellent examples of circularity in practice. Quality clothing lines, milk delivered in glass bottles by electric vehicles, deposit return machines for used glass cola bottles. Unfortunately, convenience and greed took over and as a society we need to think differently and change our behaviour and buy-in to a different way of living.

A circular economy is about more than just recycling

Recycling is still a position within the waste hierarchy where many corporates set (and limit) their sustainability targets.

Recycling is without a doubt an important aspect especially for materials that experience no degradation from the recycling process, such as aluminium. However, lower grade materials that aren't designed to be recycled or aren't capable of being recycled infinite times end up being downcycled into lower quality resources, in turn limiting their long-term usability.

We would recommend using the waste hierarchy as a tool to firstly benchmark against and to then track progress against.

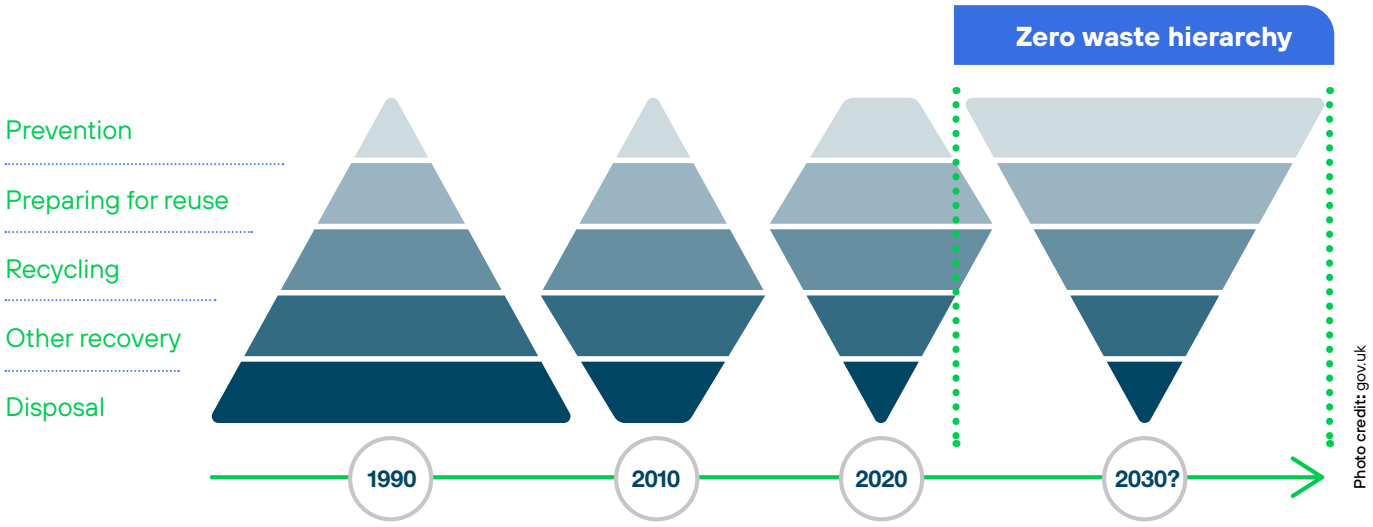
As illustrated in DEFRA's Waste and Resources Strategy, 10 years ago disposal was prominent, with most material ending up in landfill. Today we are seeing a large portion recycled, however, to move further up the hierarchy, the focus needs to be on reducing disposal and recovery and continuing to increase reuse and prevention.

The incentive to review your waste process, current recycling levels and explore opportunities to minimise wastage is not just in the legislation but it's the fact that the price you pay will rise if you do nothing differently.

Recycling itself is seeing more challenges that are impacting opportunities for revenue return on materials. The UK is heavily dependent upon export for commodities such as recovered fibre and plastics and these markets are volatile.

Beneath recycling on the waste hierarchy is recovery. The UK is reliant upon other European countries for the export of refuse derived fuel (RDF), a sustainable fuel manufactured from residual waste that cannot be recycled. The Dutch (who take a large proportion of the UK's waste for incineration) Government has introduced an **RDF tax** on foreign waste that is incinerated in their facilities.

If access to this market is further impacted either logistically or financially then it is likely to result in increased costs to UK businesses.



Set your sights on zero waste

At a political level the benchmark for the UK to hit net zero emissions by 2050 has been set which means balancing carbon emissions with carbon removal. This comes down to **CO_2 reduction**.

The Committee on Climate Change's (CCC) progress report reveals that no UK sector has showcased good progress to managing climate risk and the green economy has unanimously called for a zero philosophy to steer the nation towards its climate targets.

With waste being a major contributing factor to climate change, businesses should now be looking beyond recycling targets and striving towards broader sustainability targets that include tracking their trajectory course for temperature mitigation.

Making that step change

According to a 2018 study, by Circle Economy, the world was only 9% circular, with more than 90% of raw materials used globally not yet being put back into the economy.

More needs to be done to make effective change and for a business starting out there are **four areas** that need to be targeted, all are intrinsically linked to the waste hierarchy. Below are examples of Reconomy working with businesses in each area:

1 **Circular Design** (the goal here is prevention):

Assess what products or materials bought into the business are made from, their durability and how easily they can stay in the economy.

M&S developed a closed loop office environment with office furniture made from waste cardboard, a significantly better environmental choice than that of conventional office furniture. Made from recycled fibre, the only other additives being vegetable starch, water-based glues and a protective coating. The furniture can then be fully recycled back through the loop once it is due for replacement.

2 **Product Service** (the goal here is reuse):

Move away from the traditional ownership model and instead lease to retain the materials to repair and reuse.

As part of a site clearance over 300 lockers of varying sizes, most of which were in good working condition were able to be reused rather than recycled. Following numerous enquiries, agreement was reached for the lockers to be donated to Hemingford Abbots Golf Club and Houghton Hall Equestrian Centre, both based in Cambridgeshire. This saved the Technology Centre a considerable disposal charge.

3 **Repurposing** (the goal here is recycle and reuse):

Turning used products or materials into other goods via upcycling.

In partnership with Balfour Beatty Living Places, Derby City Council and HM Prison Foston Hall, Reconomy was tasked with the recycling of 14,293 streetlamps; regarded as a 'difficult' waste stream to deal with. The materials were deconstructed and the individuals components used to create new products.

4 **Resource recovery** (this is the end of the line with recycling):

When reuse through donations is not an option the materials can be recycled and converted into renewable energy.

McArthurGlen Shopping Outlets implemented site segregation to include food waste around high volume food waste areas. Diverting this waste stream to a PAS110 certified anaerobic digestion facility resulted in the material being converted to energy and compost, classifying the process as recycling rather than recovery.

RSVP
Reconomy Social Value Programme

Reconomy runs a social value programme for its customers. It has two main strands: bridging gaps and breaking barriers. Via a number of partners, Reconomy provides opportunities to help young people leaving care, ex-offenders, ex-military and the homeless to find meaningful employment and prevent them becoming a statistic. This work is measurable via a portal that tracks social value as a monetary figure.

> A great example of RSVP is its ground-breaking partnership with The National House Project – a radical housing solution for young people leaving care and given access to an empty property where they will be given the skills to make improvements to what will become their home. Reconomy also provided Business Mentors to help with employability support, coaching and job opportunities.

Want to discover more? Please R.S.V.P. to **rsvp@reconomy.com**

Sustainable Development Goals

It is important to take into consideration the Sustainable Development Goals (SDGs) and start to align plans and activities to these. The SDGs are 17 global goals developed by the UN as a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity. These goals cover the key challenges that need to be tackled and should be included within your sustainability and waste strategies and targets.

Many of these are relevant to resource management if you consider the full value chain. Businesses have a responsibility to ensure waste is being handled responsibly and that it isn't contaminating waters or land or being processed using modern slavery for example.

Alongside the incorporation of the SDGs, DEFRA's waste and resource management strategy is a great framework for businesses to follow and align themselves with. More recently the launch of the Clean Growth Challenge, a key part of the modern industrial strategy, demonstrates a determination and drive from the government to become the first major economy to legislate to end its contribution to global warming by 2050. Part of this initiative includes innovation in sustainable plastics in pursuit of **achieving net zero.**

Calculating waste

Reconomy has developed a Zero Waste Index that can plot where your business is positioned in relation to zero waste and in terms of alignment with climate change.

To calculate a benchmark the tool requires volume of waste (in tonnages) produced (as a whole split across individual sites) and the processing method: reused, recycled, recovered (typically through the process of incineration) or landfill.

Definitions

Zero waste to landfill

Zero waste to landfill is defined as 'all waste that avoids landfill', excluding elements that are technically non-recyclable (due to legislation, lack of facilities or material type) or classified as hazardous waste. A target of 99% of total waste diverted from landfill equals zero waste to landfill. Where hazardous waste is unavoidable and must be disposed to landfill, this should not represent more than 1% of total waste.

Driving to achieve ZERO WASTE

Zero waste

To become 'zero waste', all waste materials that you create need to be diverted from landfill and incineration.

This is achieved by 'closing the loop'; designing and managing products and processes to avoid and eliminate the creation of 'waste', conserving and recovering all resources, repairing / recycling discarded resources and putting them back into nature or the marketplace, and reducing the consumption of materials.

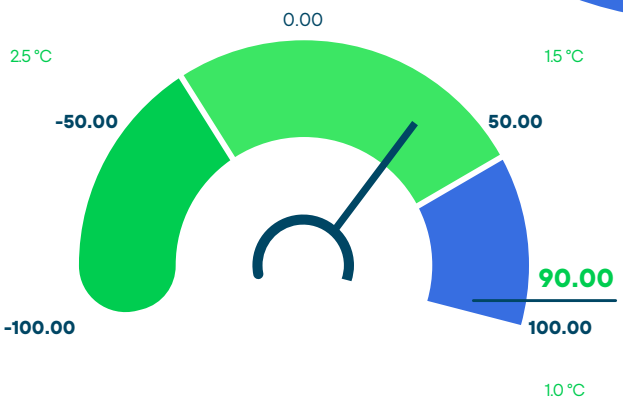
Achieving zero waste is a long-term process and is not always feasible due to legislation, industrial processes, public infrastructure or gaps in technology. The measure of zero waste, in line with the Zero Waste International Association standards, requires 90%, of all discarded resources to be diverted from landfill or incinerators.

Once this is established, poor performance areas become clear. This provides the outlook needed to set some stretching but achievable targets. When setting goals, it is important to be clear on the definition of term that you are committing yourself to.

Zero waste to landfill should be the first milestone target if that isn't already being achieved, with zero waste as an end goal.

As illustrated below, the Zero Waste Index is a simple tool that can show a business where it is tracking against both the zero waste to landfill and zero waste targets. It also provides an indication of the likely temperature rise contribution being made.

If a business is operating within the blue section, it is performing well and should be working to maintain and fine tune processes to continue on that path.



Once your goals are clear a roadmap should be developed with measurement tracking points throughout the period to ensure progress against the plan is made. Above is a snapshot of the index that is currently being used by Reconomy to help clients meet their climate change aspirations.

This approach also supports the legal requirements for environmental reporting that came in on 1st April 2019. For qualifying organisations, the obligations require them to measure their waste so that it can be reduced and managed more sustainably. This means using the waste hierarchy to measure types of wastes, volumes being produced, their disposal routes and end destinations.

Conclusion

Zero waste is more widely being talked about and should be a target that businesses are now aiming for. If we consider the approach from Defra's strategy, most of the major issues have been addressed and it has provided clarity on the direction of travel. Although there are many consultations that still need to take place, there have been insights revealed regarding future changes that provide the steer for businesses to act upon now, rather than waiting for legislation to enforce it.

As responsible businesses, it is important to stay focused on doing the right thing by developing sustainable business models. Reconomy works with leading UK brands to guide them through this process – helping to manage the waste and resources that you have, planning ways to reduce it and inform you along the way about any other further opportunities for positive behaviour change.

If you are interested in finding out your Zero Waste Index score, and on what trajectory your business is heading, please do get in touch. We can assist you to plot where your business is now in relation to your current path and work with you to create a practical plan that you can implement.

Get in touch

Are you ready to start your sustainable business future? Contact us today:

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