

THE CIRCULARITY MINDSET CHANGE

Packaging AS AN asset

Authors:

Adrian Foulger, Consultant,
Planet Tracker

John Willis, Director of
Research, Planet Tracker

Thalia Bofiliou, Senior
Investment Analyst, Planet
Tracker

Nicole Kozlowski, Head of
Engagement, Planet Tracker
nicole@planet-tracker.org

Do accountants hold the key to making the circular economy a reality, whereby physical flows of packaging are redirected to reuse and recycling, rather than to waste?

Presently, companies treat and value packaging as an asset up until the point that the product is sold. Once in the hands of the consumer, the packaging asset often becomes someone else's liability. Think of your local municipality which is faced with the costs of disposal or waste treatment.

But if the packaging remained an asset to the producer or seller they would want to look after it and reclaim it back from the consumer. Would a move to an asset mindset rather than a liability one, cause a step change in achieving a circular economy mentality?

Key takeaways

- Currently, packaging switches from a corporate asset to a society liability when the customer purchases the product.
- From a financial viewpoint, it is preferable to make the liability and its costs someone else's problem.
- But adopting an ongoing asset ownership approach should lead to optimal reuse and recycling of packaging.
- Assets - i.e. objects of value - are not generally thrown away. A liability to asset mindset transition is needed.

How attitudes would change

- **Finance directors** will aim to maximise and protect the value of these packaging assets, given the scope for balance sheet, margin and cash generation benefits.
- **Investors** with an eye on financial returns, will be aligned with the FD/CFOs and receive a sustainability bonus at the same time.
- **Consumers** will shift to a 'rent' rather than an 'own' model, resulting in a lower environmental footprint and the removal of a waste liability.
- **Policymakers and government** will be incentivised by minimised cost of waste treatment and disposal, allowing reinvestment in other services.

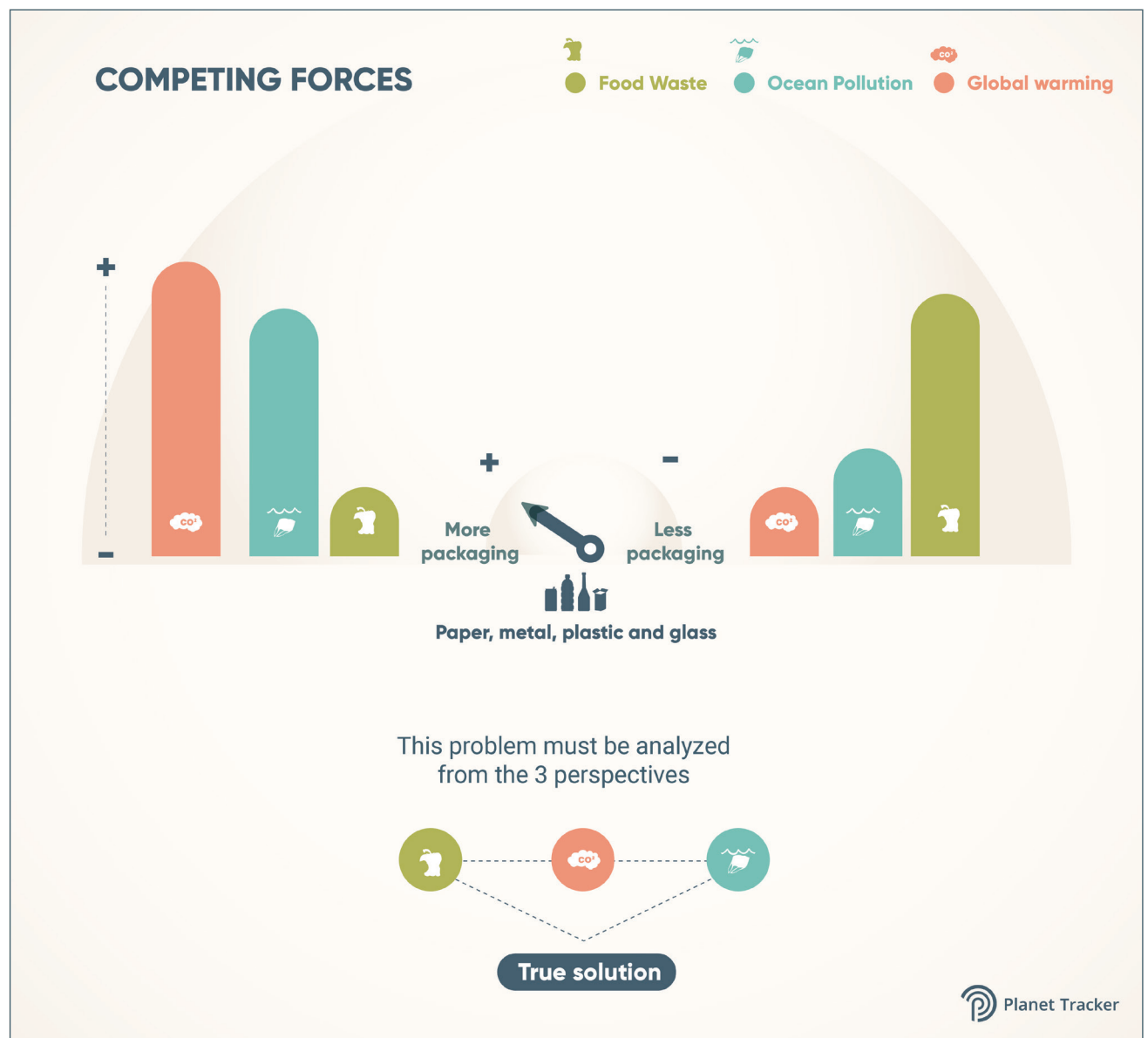


A confused starting point: time for a change of thinking

Most packaging research and policy is coming from one of two directions:

- 1 The carbon footprint - a liability mindset
- 2 End-of-life issues, such as ocean pollution, landfill or dumping - also a liability mindset

Both have significant areas of overlap, with the 4Rs (reduce, replace, re-use, re-cycle) relevant to both. However, the solutions can result in different outcomes; glass may avoid an ocean pollution issue, but it can carry a higher carbon footprint than plastic when manufactured.

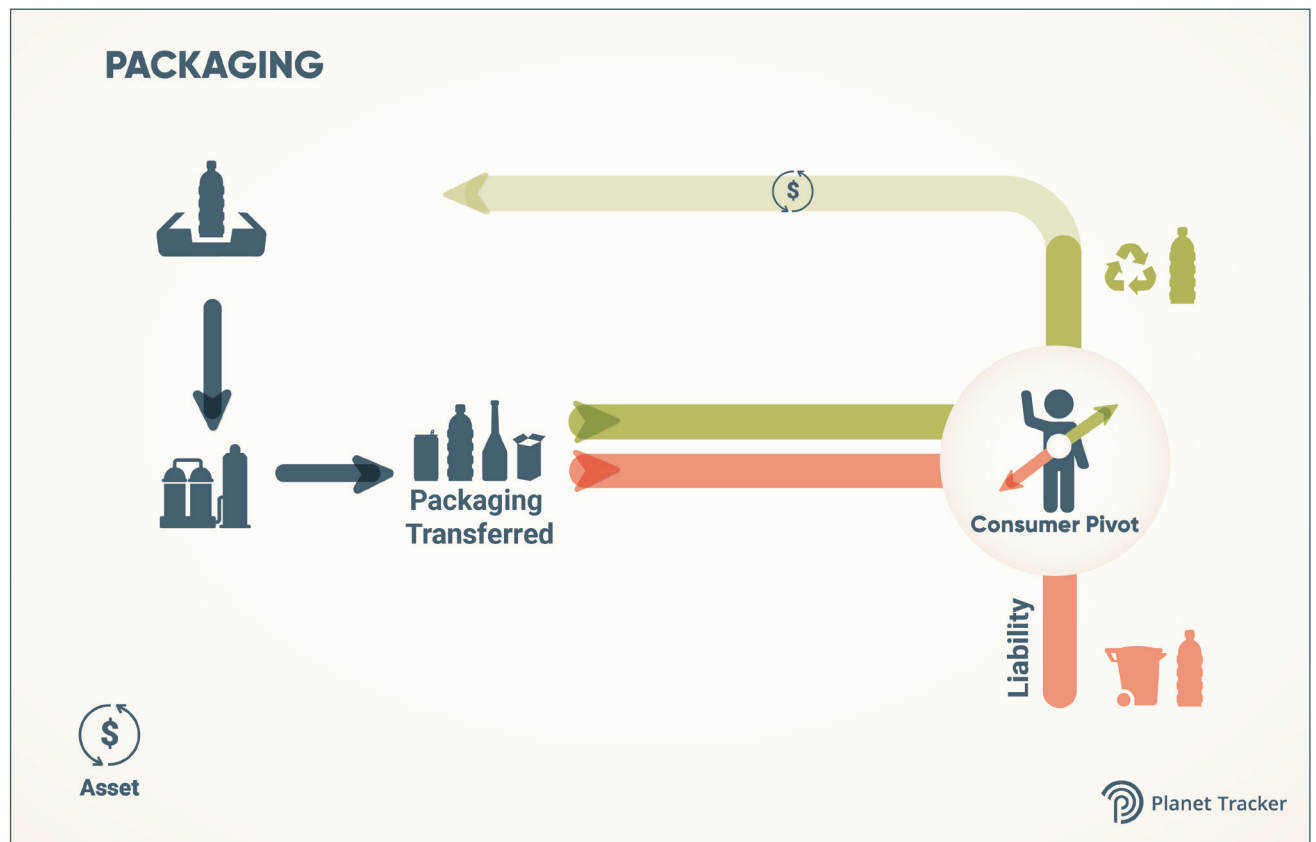


The net result is conflicting data and 'scissor-paper-stone' type conclusions - the pros and cons of each product through different lenses. And this is before factoring in the positive utility value of packaging, such as extended shelf-life helping reduce food wastage. The resulting confusion can help fuel inaction.



Focus on the asset

Our starting point is a financial one: asset or liability? Current thinking places packaging in the asset bucket until the point that the product is delivered and/or consumed. At this point it becomes a liability (waste).



Planet Tracker believes a change in the present financial thinking of packaging would produce beneficial results. Very broadly assets are good and should be optimised. In contrast, liabilities are bad and should be minimised. Companies aim to protect assets and avoid liabilities.

When it comes to packaging, the building blocks are the starting material(s): 'tin-paper-glass (scissor-paper-stone) and plastic'. These compounds start life on the balance sheet as current assets, initially as raw materials, and then as part of finished goods within the inventory line. They are real and tangible.

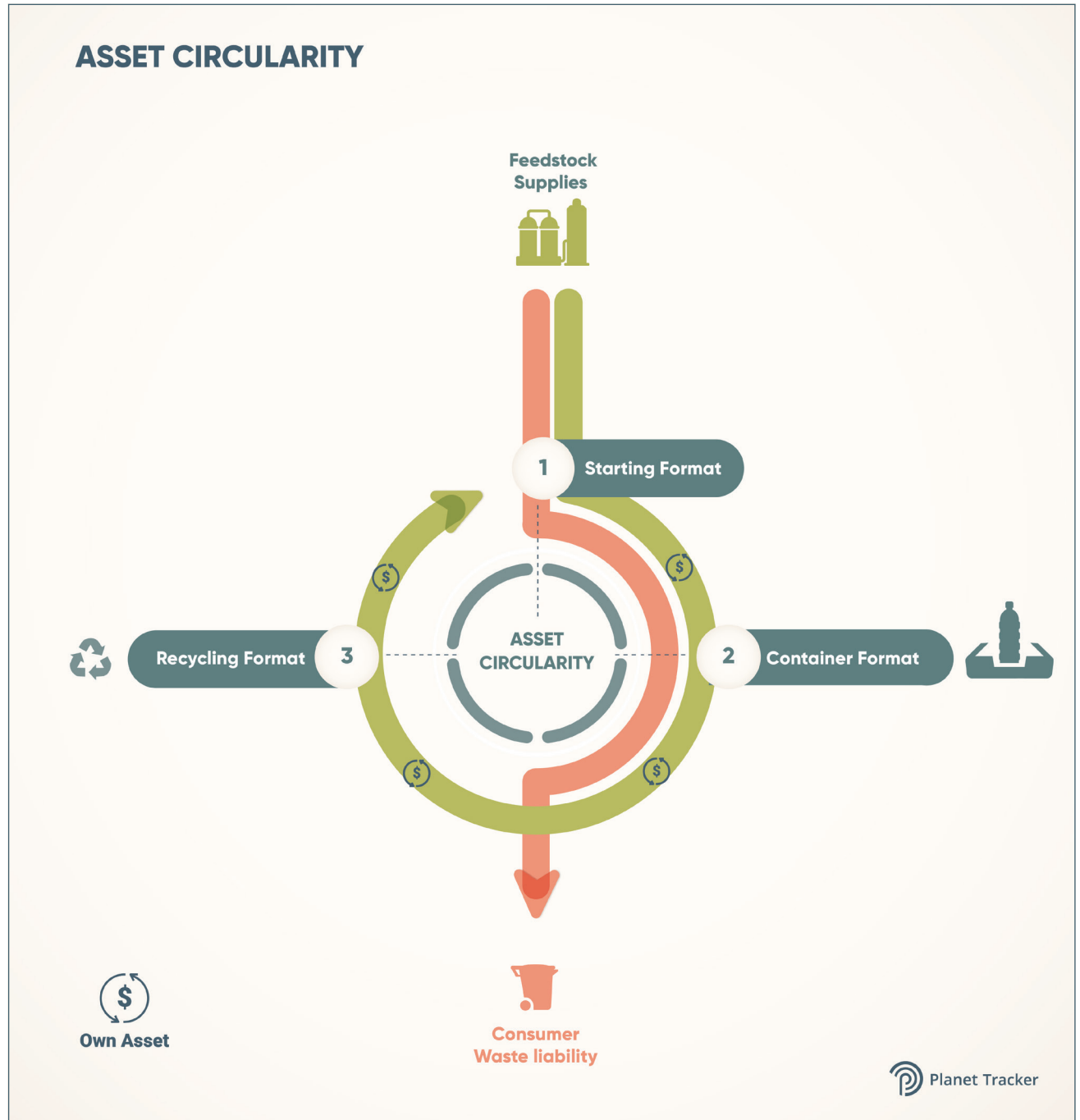
At the point of sale, these packaging assets, along with the related product, become the property of a new owner: an intermediary (i.e. wholesaler, supermarket etc.) or end-customer. Also at this point, control is lost and the packaging becomes a potential liability. This includes a possible contingent liability for the brand; reputational and financial in regions where governments and regulators are introducing extended producer responsibility policies.

We believe that the continued ownership of the packaging asset by the brand or product company makes more sense, with a 'right of use and requirement to return' taken on by the end consumer. A modern economy's 'rent not own' model.



This retention of the ownership of the packaging - now that it's an asset - would support optimisation of this asset - in particular, direction over the reuse or recycle decision. Significantly, we see the recycled material as still belonging to the original packaging owner, resulting in a closing of the asset loop.

This ownership and control of the reused and recycled material is key. With mandates for use of recycled content increasing, access to such material is already becoming an issue. Owning such an asset is valuable. Continued ownership therefore makes sense for plastics and other forms of packaging.



- 1** Starting format - packaging material in raw format (ie PET flakes)
- 2** Container format - packaging material in container format (ie PET bottle)
- 3** Recycling format - packaging material in recycled format (ie rPET flakes)



Asset approach: a policy fit

There are already regulations in place in a number of geographies which encourage this shift to an asset-focused mindset. These include:

- **Deposit return schemes** - with the consumer required to return the packaging to a collection point to get their deposit back, the consumer is in effect borrowing rather than owning the packaging. Such schemes have been in place for bottles (both glass and plastic) in a number of European countries ¹ for a number of years and continue to be rolled-out in Europe, North America and South America. While reuse of this returned packaging isn't being mandated in most instances, this mechanism clearly supports such an approach. At the very least, it ensures the segregation of 'waste' for recycling and regardless of reuse or recycle, it creates a platform to capture which asset is being returned. This is an important step for continued asset ownership.
- **Producer responsibility schemes** - basically fines or taxes on companies bringing the product to market (e.g. brands, supermarkets etc.) with the 'producer pays' principal linked to volume of waste escaping the return or recycle mechanism. This continued ownership of the 'problem', despite it being a function of consumer (in)action, is a stark example of the liability mindset. **If a producer retains responsibility for the 'problem', it makes much more sense for it to also retain ownership of the asset**, as the two go hand-in-hand. This encourages the corporate to spend on reclaiming the product, rather than just accepting the fine - the latter being an action that has no environmental benefit. This, of course, assumes the levy is set at a sufficient level and does not encourage the corporate to pay up rather than change its working practices.
- **Recycled content requirements** - mandated minimum re-cycled content levels in new packaging is becoming an increasingly common feature, particularly in the plastics space; European directives require 25% recycled PET (rPET) content in PET plastic bottles by 2025 and 30% by 2030. Even stricter rules on plastic bottle recycling are law in California.² This creates demand for pure same specification recycled material. Continued ownership of the 'material' asset would create guaranteed access to own recycled feedstock; a proper completion of the circle. In a similar manner to producer responsibility schemes, any levy for non-compliance needs to be set at an appropriate level. Currently, this is not always the case. For example, in the UK, the Plastic Packaging Tax - a £200 (USD 252) per metric tonne levy on producers or importers of plastic packaging not containing 30% recycled plastic content - is now in force, but presently many companies prefer to pay this tax as it costs less than the price of using the post-consumer recycled (PCR) films.³
- **Improved waste management** - full and attributed collection, along with improved sorting to minimise leakage, landfill and burning outcomes. Having ongoing value naturally supports active waste management; much better from a brand perspective for a tolling fee⁴ for an asset on a per tonne basis, than a liability fine per tonne for mismanagement.

¹ Making Empties count deposit return schemes across the world

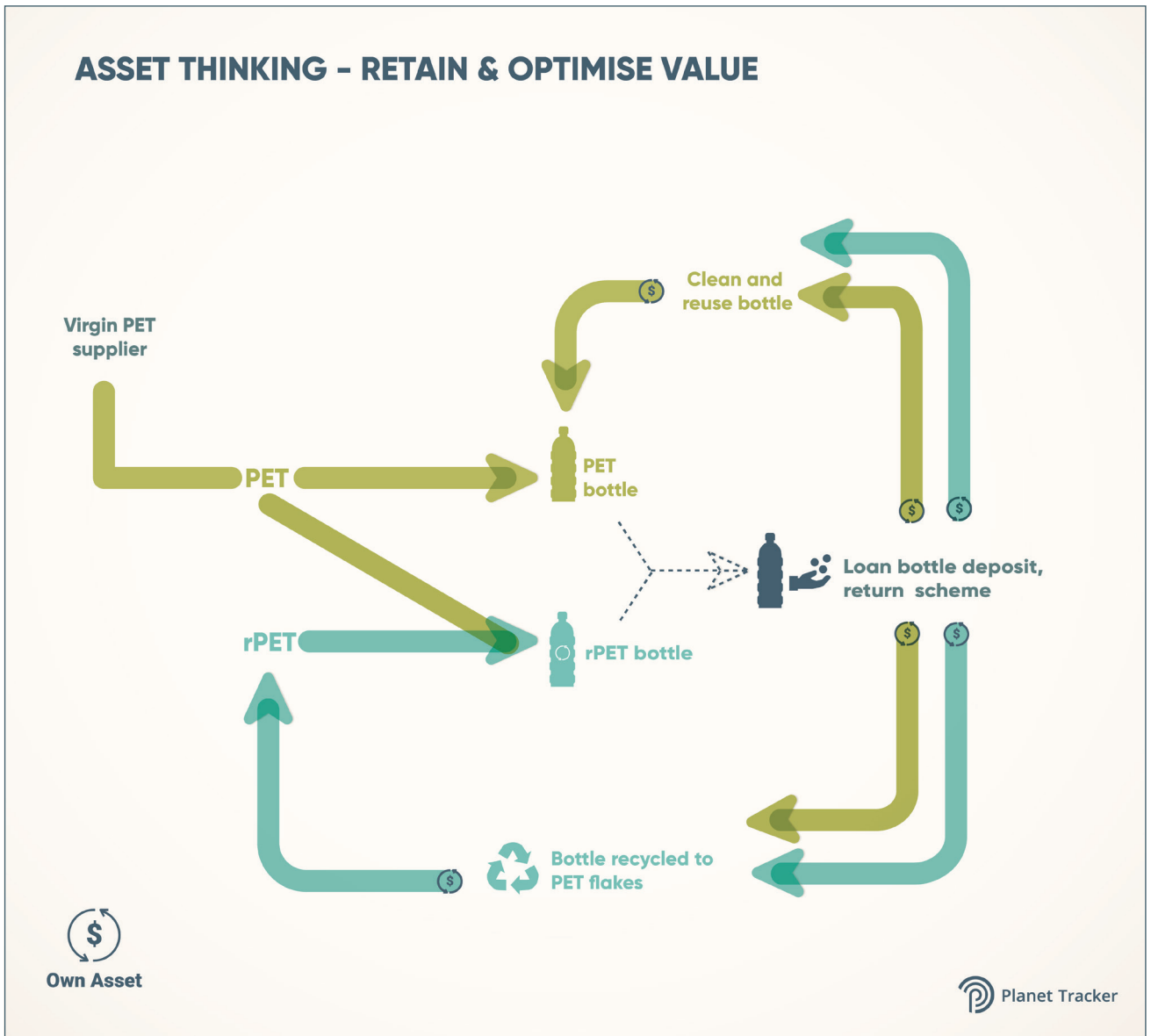
² [Planet Tracker – California leapfrogs EU](#)

³ [Packaging Insights – UK plastic levy](#)

⁴ Plastic recycling toll processors take a company's waste and convert the material back into a reusable flake form and/or potentially remanufacture the material completely back into a new finished product, which may or may not be the same as the original application. Toll processors typically structure their services based on the weight or quantity of materials process and charge on a weight basis dependent on the quality and quantity of material received. ([Greenpath Whitepaper](#))



ASSET THINKING - RETAIN & OPTIMISE VALUE



Asset approach: a consumer fit

Consumers are demanding a more sustainable approach from brand owners and retail channels. Thinking of packaging (and/or its constituent materials) as an asset that belongs to someone else, with ongoing value, should support increased re-use rates and real recycling - both key elements of achieving circularity.

Asset approach: a supplier fit

We see this asset approach as a fit with the plastic industry's need to change - a shift from a one-time use liability to a creating an asset with ongoing utility. At the same time, the resulting increase in asset availability (security of supply of recycled feedstock) should support investment in a new toll-based processing industry built around refining and refreshing recycled material.



Shifting to an asset approach: what is needed?

Encouraging responsible use often requires an assessment of the entire supply chain, taking into account factors such as resource efficiency, product longevity and the use of circular economy initiatives. Continued ownership of the packaging asset would help influence the right choices, but to move towards this we need:

- **A proper value ascribed to the packaging asset** and its constituent materials. Increasing the mandated proportion of recycled content should increase demand and have this effect.
- **Design of packaging assets** to enable easy segregation, return, reuse and recycling. Focused on easy to recycle compounds (e.g. PET) and the highest use of recycled content.
- **Standardisation of packaging assets** to create scale - a common format across a product or range regardless of producer or brand owner - e.g. UK milk and German water containers.
- **Infrastructure that enables packaging to be returned.** This network needs to cover both retail and domestic, allow early separation of type (i.e. HDPE) and data capture.
- **Data capture** that enables information to be gathered on what is returned and by whom. This could be via physical scanning or 'remote capture' à la Amazon's no check-out food store.
- **Education of the consumer** that the packaging isn't theirs and needs to be returned, if necessary with hire-type of deposit schemes and the initial subsidy of deposit credits.
- **Co-ordinated wide-spread adoption**, from local to international and supported by global brands and global retailers. Ideally, an asset needs to be recognised as an asset everywhere.
- **Investment in waste management**, covering in particular processing back into its constituent raw material - i.e. the asset in its starting state in a homogenous form allowing value and ownership by weight.





Making it real: examples of an asset mindset

Example 1: LOOP, a global reuse platform enabled by a multistakeholder coalition of manufacturers, retailers, and consumers that aims to **Eliminate the Idea of Waste®**, is trialling a deposit-linked packaging return, clean and reuse system in a number of countries (e.g. USA, UK, France). Participants include leading international brands (e.g. Procter & Gamble, Unilever, Coca-Cola) and leading food retailers (e.g. Tesco, Carrefour, Kroger). Key components include different packaging and a related cleaning service, deposit and return data capture, a physical return channel with infrastructure to support and maintain the packaging asset. In Loop's own words:

"Why own a product's packaging (and have to throw it away when you're done), when all we really want is the stuff inside? With Loop, temporarily place a 100% refundable deposit to borrow the packaging, and we'll professionally clean and reuse it once you're finished."⁵

This is a different route to the 'consumer owned-container' refill route being trailed by others such as the Refill Coalition⁶ in the UK comprising M&S, Morrisons, Ocado and Waitrose and supply chain company CHEP⁷. Planet Tracker views this as a complementary rather than a competing alternative to the asset thinking approach.

Example 2: Petainer manufactures plastic packaging products including refillable PET bottles used by brands like Coca-Cola in South America. It also makes refillable PET bottles made with recycled PET and in one geography actually adopts a true continued asset ownership mentality with proper traceable closed loop recycling:

*"At our Czech factory, we take in recycled PET sourced from the DRS (**Deposit Return**) Scheme and process this material in to ESFA (European Food Safety Authority) approved **recycled PET flakes**. A true closed loop **guarantees high quality feedstock** as we can avoid mixed plastics, labels and other foreign material entering the stream.*

*Petainer's system is unique in offering a true closed loop solution with lower CO2 emissions compared to other forms of processing. Within the closed loop model, producers are maximizing the value of their plastic waste. **Instead of needing to buy rPET at the market rate, a producers own supply can be used, reducing the overall cost of new bottles, and guaranteeing the PET gets recycled.**"⁸*

(Note that bold text formatting inserted by Planet Tracker.)

⁵ [Loop – designed for reuse](#)

⁶ [The Refill Coalition](#)

⁷ [CHEP](#)

⁸ [Petainer refillable bottle expertise](#)



Accounting for an asset approach

As we have outlined above, a change from a one-time use to ongoing ownership, while a net positive, comes with increased complexity. This is also true in accounting terms, with the increased complexity going hand in hand with a number of features that would be attractive to both CFOs and investors. These include:

- Lower packaging input costs leading to improved margins/profitability and cash generation.
- Conversion of costs to assets resulting in greater balance sheet strength.
- Additional profit if packaging assets aren't returned and where deposit level exceeds cost.

We also believe there is scope for a new outsourced/third-party managed packaging industry to emerge, along the lines of CHEP's pallet rental offering.⁹ This would help commonality and scale - two factors that we view as important for success.

Current situation: simple accounting

A consume and throw approach lends itself to a simplistic accounting approach. Packaging materials are split into two groups - transport related and product related.

- For transport the reusable elements (e.g. bins and pallets) are capitalised and amortised over their useful life while the one-time use elements (e.g. shrink wrap) are charged via the P&L as logistics costs.
- For the product related packaging materials, these are added to the overall finished product cost (raw materials, work-in-progress, finished goods inventory) and at the time of sale (e.g., to a wholesaler) charged to the P&L as cost of goods sold.

Simple and clean, easy to understand and to administer.

An asset-based world: complex accounting

An ongoing asset ownership approach is a much more complex accounting challenge.

- While sales proceeds are treated similarly, only the product cost (i.e. ex-packaging) is charged to the cost of goods sold. If no other net costs are incurred, this gives scope for lower prices or enhanced margins.

The packaging is instead treated as an ongoing long-term asset, subject to lifecycle length. The first element of complexity is achieving ongoing control and ownership, required for asset recognition, while it is in the hands of the consumer.

- This is typically achieved via either a rental structure and/or deposit structure. This can be entered into directly, or via an agent (e.g. wholesaler/retailer) with a related cost/charge. The net result of the deposit is a temporary cash asset (direct) or financial asset (agent) and a corresponding financial liability.

⁹ <https://www.chep.com/de/en/why-chep/how-chep-works/renting-pallets-instead-buying-pallets>



- These reverse out and disappear when the packaging is returned. However, in instances when it isn't returned, the deposit related cash stays on the balance sheet and profit or loss recorded depending on whether the deposit was more (profit) than the value of the packaging or less (loss).

Once a packaging asset is returned it can, if appropriate, be prepared for re-use either in-house or by a third-party - i.e. 'refreshing'. Any damage incurred during this process will need to be factored in, with the damaged asset, assuming it can be collected, transferred to the recycling stage (see below).

- The actual cash 'refreshing' cost doesn't improve but rather maintains the packaging asset. As such it needs to be charged to the profit & loss account (P&L), akin to property maintenance. This will impinge margins on reuse rounds. That said, so long as the cost of 'refreshing' is lower than the cost of a new container, then margins will still be higher than on the 'consume and throw' approach, and that excludes pricing-in any externalities. Staying with this logic, net cash costs will also be lower (net cash flow better) if refresh costs are less than replace.

At the end of its (reuse) life, or after first use and return for a non-reusable item, the packaging asset is re-cycled into its constituent component(s) - a transformation of the asset into a feedstock asset. This conversion will incur a processing cost.

- Assuming no change in feedstock price this processing cost would appear as a P&L charge. Loss and wastage during the recycle process (which is usually below 20% for PET bottles) also needs to be factored in. This will typically take the form of a non-cash amortisation charge and result in a correspondingly lower 'asset' carrying value.

Recycled feedstock assets can now restart their physical and financial journey. However, there is one wildcard, feedstock prices.

- A significant move in feedstock prices at this stage of the cycle could trigger a mark-to-market¹⁰ event resulting in a revised asset valuation and a corresponding P&L impact.

Simple again: the outsourced packaging model

One option that would dramatically simplify the accounting mechanics would be a complete outsourcing of the packaging component. Under this scenario, the product owner would never own the packaging. Its only costs would be production, promotion and an outsourcing charge; an asset light model. LOOP, for example, is a 'model' that could morph into offering that complete packaging asset service.

¹⁰ Revaluation of an asset (or liability) to current market valuation



A financial solution

Treating plastic packaging as an asset creates a simple and positive solution to the problem of plastic waste. And it's a problem that without change is not going away. Alarming, the latest OECD Plastic Outlook: Policy Scenarios 2060,¹¹ predicts an almost tripling of global plastic waste by 2060, forecasting *'global plastics consumption rising from 460 million tonnes (Mt) in 2019 to 1,231 Mt in 2060 in the absence of bold new policies, a faster rise than most raw materials'*.

Treating plastic packaging as an asset, and the recovery and reuse models this encourages, will ensure the packaging is owned and valued rather than discarded. The present liability mindset, results in an operating model that encourages plastic producers, brands and consumers to make waste someone else's problem. If the asset approach proved successful, perhaps 'waste' will no longer be defined as 'a material, substance, or by-product eliminated or discarded as no longer useful or required'?

Planet Tracker encourages the move to an asset mindset as soon as possible.

¹¹ [OECD Plastic Outlook - Scenarios to 2060](#)



Disclaimer

As an initiative of Tracker Group Ltd., Planet Tracker's reports are impersonal and do not provide individualised advice or recommendations for any specific reader or portfolio. Tracker Group Ltd. is not an investment adviser and makes no recommendations regarding the advisability of investing in any particular company, investment fund or other vehicle. The information contained in this research report does not constitute an offer to sell securities or the solicitation of an offer to buy, or recommendation for investment in, any securities within any jurisdiction. The information is not intended as financial advice.

The information used to compile this report has been collected from a number of sources in the public domain and from Tracker Group Ltd. licensors. While Tracker Group Ltd. and its partners have obtained information believed to be reliable, none of them shall be liable for any claims or losses of any nature in connection with information contained in this document, including but not limited to, lost profits or punitive or consequential damages. This research report provides general information only. The information and opinions constitute a judgment as at the date indicated and are subject to change without notice. The information may therefore not be accurate or current. The information and opinions contained in this report have been compiled or arrived at from sources believed to be reliable and in good faith, but no representation or warranty, express or implied, is made by Tracker Group Ltd. as to their accuracy, completeness or correctness and Tracker Group Ltd. does also not warrant that the information is up-to-date.





ABOUT PLANET TRACKER

Planet Tracker is an award-winning non-profit financial think tank aligning capital markets with planetary boundaries. Created with the vision of a financial system that is fully aligned with a net-zero, resilient, nature-positive, just economy well before 2050, Planet Tracker generates breakthrough analytics that reveal both the role of capital markets in the degradation of our ecosystem and show the opportunities of transitioning to a zero-carbon economy.

PLASTIC TRACKER

The goal of Plastics Tracker is to stem the flow of environmentally damaging plastics and related-products that are creating global waste and health issues by transparently mapping capital flows and influence in the sector, starting from the production of resins through to product-use. By illuminating risks related to natural capital degradation and depletion, investors, lenders and other corporate stakeholders across the economy will be enabled to create more sustainable plastics products.

ACKNOWLEDGEMENTS

Authors: Adrian Foulger, Consultant, Planet Tracker; John Willis, Director of Research, Planet Tracker; Thalia Bofiliou, Senior Investment Analyst, Planet Tracker

WITH THANKS TO OUR FUNDERS



The Jock Clough
Marine Foundation



This work was made possible through the support of Plastic Solutions Fund, a sponsored project of Rockefeller Philanthropy Advisors.

For further information please contact:
Nicole Kozlowski, Head of Engagement, Planet Tracker
nicole@planet-tracker.org

www.planet-tracker.org @planet_tracker