



WWF POSITION:

THE ROLE OF REUSE IN A CIRCULAR ECONOMY FOR PLASTICS

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Purpose of this document

The global population currently consumes natural resources and generates waste faster than the planet can generate resources and faster than we can manage our waste. Keeping resources circulating in the system for as long as possible can reduce the demand for virgin materials and reduce the amount of waste that needs to be managed. This is especially relevant for packaging which tends to have short-term use.

As efforts to address the global plastic waste and pollution crisis increase, there is a growing focus on reuse as a solution. Reuse systems can provide a number of potential benefits over conventional linear approaches, but it is important to ensure that these systems are built on a solid set of principles. This paper aims to: 1) outline the key benefits of well-designed reuse systems and 2) provide recommendations for implementing effective reuse systems. This WWF global position paper lays out a framework through which reuse systems can support WWF's ambition for a future where people and nature thrive.

Background

The global plastic waste and pollution crisis is an urgent issue affecting nature, people, and climate. Global plastic production has grown substantially in recent decades, [quadrupling in the past forty years](#). Plastic has become ubiquitous in our daily lives and its production and use show no signs of slowing. [Global plastic production is expected to quadruple \(again\) by 2050](#), compared to the 2016 global baseline.

[The solutions needed to reduce leakage of plastic into the ocean by at least 80% by 2040 are already available](#). Despite the availability of these solutions, [current commitments by industry and governments would only amount to a 7% reduction in plastic flow into the ocean by 2040 if implemented](#). Global progress is hindered by barriers such as inadequate government policy on local, national and international levels, static business models, and a lack of funding mechanisms. Systemic, global adoption of a combination of ambitious strategies is needed to avoid a business-as-usual scenario, [which would see the amount of plastic waste entering the oceans triple by 2040](#).

Through WWF's global [No Plastic in Nature](#) initiative, WWF is leading the charge to reimagine the lifecycle of plastic. WWF envisions a future where the amount of plastic produced is significantly reduced, the flow of plastic pollution into nature has halted, and the remaining plastic instead flows circularly through a closed system. To achieve this vision will require the elimination of unnecessary plastic, substantial increases in the global recycling, reuse and composting of plastic, and a shift to sustainable inputs and new production and consumption models for the remaining, necessary plastic.

The Benefits of Reuse

Reusable packaging is packaging designed to be used multiple times for the same purpose for which it was conceived. While single-use packages are designed to be thrown away after one use, reuse systems employ a circular system where packaging can be used, cleaned, refilled, and reused, over and over again. Reusable packaging is not transformed for a different purpose, and it is supported by a functional system that enables the package to repeatedly serve the same purpose.

The wide-scale adoption of reusable packaging and reuse systems should serve as a key strategy in minimizing the environmental and social impacts of the global plastic industry. Recognizing that reduction should be the highest priority strategy pursued to reduce plastic waste, reuse has a clear role to play in helping to reduce the amount of resources used and extending the life of the resources we do use. When scaled effectively, reusable systems have the potential to offer a smaller material and emission footprint compared to the status quo. Research has found that [over the lifetime of a reusable package, its carbon impact per use, its resource efficiency per gram and the likelihood of it being littered are all favorable compared to a single-use item.](#)

Though the scope of this paper is focused on reuse in a circular economy for plastics, it is worth noting that reuse systems should also be integrated within other single-use materials systems. Increasing reuse of other packaging types (e.g. glass, aluminum) can have similar environmental, social and economic benefits as those described below in the context of plastic.

While reuse systems should be pursued as a high priority strategy to reduce global plastic pollution, reuse may be best suited for specific packaging formats, industries, and applications, especially in the near-term. For example, subscription models for items that are re-purchased by the same individual many times offer a strong case for reuse. WWF advocates for companies in the fast-moving consumer goods space to deliver 30% of their portfolios through reuse by 2030 (these reuse systems should be able to demonstrate reduced impact as compared to single-use). For more information on different types of reuse systems, see the Ellen MacArthur Foundation report [Reuse - Rethinking Packaging.](#)

Solid Waste, Pollution and Emissions Reductions

Prevention of plastic waste is the highest priority waste management strategy, followed by reduction. Reuse falls next in the waste management hierarchy (though it can also be considered a prevention or reduction method itself) since reusable systems can prevent waste/reduce the total amount of material circulating in the system. Recycling is next in the waste management hierarchy. Disposal rounds out the waste management hierarchy; universal and effective waste collection is necessary to prevent plastic from leaking from the system.

Reuse systems have the potential to reduce greenhouse gas emissions associated with virgin plastic production, reduce global plastic pollution, and enable consumer behavior change to reduce consumers' environmental footprints. As an [example](#), scaling up reuse systems in Europe by just **20%** by 2027 would decrease 1.3 million tonnes of CO₂-equivalent emissions, save nearly 2.5 billion cubic meters of water, and use 10 million fewer tonnes of materials *annually*. The annual impacts of scaling these systems by **50%** by 2030 would prevent 3.7 million tonnes of emissions from being released, conserve 10 billion cubic meters of water, and avoid the use of nearly 23 million tonnes of resources. These estimates are based on Europe alone, which means far greater benefits if reuse systems are deployed worldwide, at scale.

Furthermore, the worsening plastic pollution crisis impacts some of society's most disadvantaged communities and, in the case of plastic pollution, coastal communities are some of the worst affected. Negative public health impacts from waste mismanagement include toxic fumes from open burning, blocked drains from dumped waste which hinder safe water supplies and create ideal environments for disease vectors such as insects and vermin, and blighting of local environments which can affect the tourism industry and consequently local economies.

Create Economic Opportunities

Reuse strategies can promote business growth. According to the Ellen MacArthur Foundation, [replacing just 20% of single-use plastic packaging with reusable materials represents a \\$10 billion opportunity](#). Adopting new reuse business models helps to shift where the economic value lies within the packaging system – value will be spread out across the lifecycle of a reusable package rather than all value being concentrated at the extraction and manufacturing stages of the lifecycle. This provides new economic opportunities with a positive net economic value for the system as a whole (for more analysis on how economic value will shift across the system as reuse scales up, see the Platform for Shaping the Future of Consumption’s Insight Report, [Future of Reusable Consumption Models](#).) Reuse systems that are carefully designed, developed, and implemented should offer convenience and cost advantages to consumers, reduce the financial impacts of waste-management on communities, and provide new opportunities for entrepreneurs, local businesses and the local workforce.

Single-use results in a loss of value to the economy, as [approximately 95% of the value of single-use plastic packaging is lost when it is disposed after one use](#). Under an optimized reuse system with economies of scale that allow companies to take advantage of cost savings across cleaning, logistics, and transportation, this value could continue to circulate through the economy (and internally at individual companies) rather than being lost.

While reuse strategies can promote business growth and retain value in the economy, reuse solutions can have high entry costs, acting as a barrier to entry for certain companies, or products. Wide scale adoptions of reuse systems across industries and communities are where systemic (and individual) cost savings can be maximized.

WWF Recommendations for Reuse Systems

General Recommendations

Reusable packaging is part of a sustainable, circular future. It should be implemented at scale to reduce our demand on natural resources and help address global plastic pollution. Reuse systems should be optimized to provide environmental, social, and economic benefits over the status quo.

Reuse must be accessible and more beneficial to consumers to be a successful strategy in driving down single-use plastic; reuse systems should also serve to improve the communities they operate within.

Where reuse systems are not yet economically possible or environmentally efficient, companies and policymakers alike should work to reimagine and redesign packaging to move toward future reuse.

Across individual reuse systems, a focus on maximizing the number of loops (uses a reusable package achieves) will help drive down total impact of the reuse system. For more specific information on indicators of success for reuse, see “*Analyzing the entire reuse system - global indicators for success*” in the [Consumers Beyond Waste Design Guidelines](#).

Reuse must be part of a comprehensive plastic pollution strategy

Reuse is an important element of any overarching strategy for reducing plastic pollution (national policy goals, corporate sustainability goals, etc.) and is highlighted in [UNEA Resolution](#)

[5/14 “End plastic pollution: Towards an international legally binding instrument”](#) as an important mechanism to ensure that products are “retained in the economy for as long as possible along with the resources they are made of, as well as minimizing the generation of waste”. Reuse systems should always be used in partnership with other “reduction” strategies, including phasing out problematic and/or unnecessary single-use plastics and re-designing packaging to use less material (but still fit within a responsible end of life management plan). When assessing opportunities to implement reuse systems, companies and policymakers should first consider any opportunities to eliminate disposable items and plastic waste altogether. This can entail decreasing the amount of packaging utilized and not offering disposable items unless specifically requested, among other approaches. Following absolute reduction, reuse systems should be implemented wherever possible.

Reuse systems must outperform single-use alternatives

Reusable packaging must be durable and able to withstand impacts from transportation, use, repair, and cleaning. Reusable packaging is therefore often necessarily heavier and more materially intensive in order to achieve these objectives. Evaluating the impacts of reusable packaging requires balancing increased durability with impacts from sourcing, manufacturing, and end of life management.

Due to the increased amount of material required to ensure reusable packaging is sufficiently durable to keep circulating through the system, the embodied impacts from material extraction, processing, and transport may be greater than those of a single-use item. Therefore, successful reuse systems must enable a sufficiently high number of uses to perform better than an equivalent single-use alternative - otherwise known as the “breakeven” point. **The higher the number of reuse cycles, the lower its environmental footprint per use.** As the quantity of resources used to manufacture a reusable package (to make it more durable) increases, the number of uses must increase too. The adoption of technologies such as QR codes, blockchain, and other tracking systems can integrate accountability into reuse systems and ensure they achieve a maximum number of uses.

The success of reuse systems will depend largely on the material choices, system optimization, and user engagement to allow reusable packaging to achieve a high number of uses. Reuse should be pursued as much as possible in circumstances where it can offer a proven, smaller environmental footprint. However, it will be important to continually assess the sustainability of reuse systems to ensure they are having the desired environmental impacts and are not creating “reusable” items that are not reused to their full potential in practice and/or are generating waste at end of life. Reusable packages that exist without a high-functioning system at scale run the risk of essentially serving as heavier, more resource-intensive single-use packaging.

Beyond the number of uses, environmental metrics such as material waste, energy use, greenhouse gas emissions, and water use across the full lifecycle of reusable packaging should be taken into consideration when evaluating the full environmental impact of reuse systems.

Reuse systems must be designed to operate at scale

While the challenges to reuse (and the enabling conditions needed) will vary from country to country and between the Global North and Global South, reuse systems must be scaled across the globe to reduce the current environmental, social, and economic impacts associated with linear, single-use systems. In order to reduce the plastic flow into the ocean by 80% by 2040, [which Pew suggests is possible with current technology](#), the direct reduction of single-use plastic and

the adoption of reuse will need to account for at least 1/3 of the total reduction in projected plastic waste generation. Other strategies, including substitution to more sustainable materials (e.g. recycled content and responsibly sourced biobased plastic) and recycling, will also need to be pursued simultaneously. Ensuring regular and effective waste collection services are available in all countries, along with safe disposal methods which avoid negative impacts on communities and the environment, are also fundamental to this vision. While the adoption of reuse as a strategy to reduce waste will be industry- and product-dependent, for the fast-moving consumer goods industry, companies should strive for at least 30% of their total portfolio to be delivered by reuse by 2030. Where appropriate, governments should be setting industry specific reuse targets to drive the uptake of reuse and increase innovation in the sector. (See [this paper](#) for a framework which organizes countries into development bands and recommends waste management strategies based on this categorization).

As reuse systems begin to scale, they should be evaluated in the context of broader challenges beyond just material efficiency. In order for reuse systems to be an effective part of the efforts to eliminate plastic pollution, they will need to provide credible evidence of environmental benefits, meet health and safety requirements, and either match or outperform single-use plastic across the needs and expectations of users.

Reuse systems must prioritize health and safety requirements

The ability of reuse systems to deliver food and other products safely is fundamental to the potential scalability of reuse. As reuse systems are implemented and expanded, safety considerations for collection, cleaning, handling, and storage are of the utmost importance; reusable packaging must meet the same health and safety standards as single-use, and the public must trust the system to consistently deliver across these dimensions. For more on the important safety considerations of reuse, see the [Consumers Beyond Waste Safety Guidelines](#).

Specific Recommendations

To transition from singular pilot reuse projects to global adoption of reusable systems at scale, there must be enabling policy and market conditions. This requires a suite of changes across the political landscape, consumer behavior change, and the way businesses envision the parallel pathways to profitability and circularity.

Enabling conditions for reuse systems vary greatly around the world. In the Global North, consistent themes include driving universal company action so no one company has to move alone, developing concrete policy, pioneering solutions to reverse logistics challenges, ensuring ease of access and affordability, education, and use for consumers, and funding additional research and development. Consumer behavior change and willingness to adopt new models as they are brought to market will be fundamental to the success of these programs.

[In the Global South, many reuse systems exist on small scales, ranging from repurposing items within a community to re-collecting glass bottles at a local shop to pioneering comprehensive reusable stores, systems, and companies.](#) These systems are often driven by economics, when single-use disposables are more expensive than reusables. [Some countries in the Global South have already passed legislation to foster enabling conditions that will drive reuse and phase out single-use items.](#) Reuse efforts that prioritize economic and social access, and those that solve multiple problems at once (i.e. scaling reverse logistics for reuse at the same time as improving local waste management access) can enable reuse and offer other social and economic benefits.

Policy Makers

Successful reuse systems should achieve economic sustainability and provide opportunities for continued revenue growth for business. Effective reuse systems must be enabled by supportive policy frameworks in order to compete economically with single-use options; there must be at least cost parity for companies between reuse and single-use packaging for delivery of the same type and amount of product. Achieving cost parity between single-use and reuse will in turn incentivize businesses and communities to recover, refill, and reuse packaging in a way that continues to drive market value. Cost parity is more likely to be realized as economies of scale are reached across reuse systems. Optimizing the efficiency of reuse systems, and implementing an enabling policy landscape will encourage consumers to choose reuse over single-use and provide companies with the confidence to continue investing in and scaling their reuse programs. Enabling policy and investments in supportive infrastructure can ensure reuse systems create new economic opportunities and financial benefits for those that pioneer them, from global companies to local entrepreneurs to new entrants working in the reuse supply chain.

Reuse goals (and eventually, reuse regulations) should be grounded in evidence-based assessments and include health and safety considerations. Regulations should include incentives for both the public to engage in reuse and for companies to invest in reuse. Reuse regulations should provide educational and communication resources for communities to successfully engage in reuse on a local level. These educational programs and communication plans may be able to be supported with funding from Extended Producer Responsibility programs or taxes on single-use items.

The regulatory landscape will play an important role in enabling successful reuse systems across the globe. There is opportunity at the [global level to mandate and accelerate reuse systems through policy instruments](#). As new policy is developed in the coming years, reuse goals should be included in national action plans aimed at reducing plastic waste. Policy can also direct and promote the sustainable design of packaging and products so that they can be reused (and recycled at end of life) and therefore retained in the economy for as long as possible.

City

Cities have an important role to play in optimizing reuse systems and ensuring reusable packaging achieves the highest number of uses, thereby driving down the environmental impact per use. For this to happen, the system must be convenient and accessible to users, and refill/return activities must be incentivized. Cities offer ideal scaling opportunities for reuse systems given the high populations and dense consumer markets. Reuse practitioners in cities can benefit from shared infrastructure, supply chain networks, and collaborative communities.

The full ecosystem of stakeholders in cities can contribute to the success of reuse systems, ensuring they are accessible, equitable, safe, and desirable for the communities they serve. Although cities serve as ideal testing and scaling locations for reuse systems, some cities will still require support from national and international policy to accelerate adoption. Cities have a responsibility to champion reuse systems and support growing reuse practitioner communities. City leadership can communicate the importance of the transition to reuse and advocate for new social norms in the form of behavior change away from single-use.

City leaders should lead reuse interventions specifically designed to engage diverse communities, and aggregate input from policymakers, businesses, and solutions-providers to offer continued support for reuse systems. For more on how cities can enable diverse and equitable participation in reuse programs, see “Social equity” in the [Consumers Beyond Waste City Playbook](#).

The transition to a just reuse economy must recognize the role of the informal waste picker sector. The adoption of robust reuse systems can generate new jobs across the supply chain from packaging manufacturing and production, distribution, collection, and cleaning to redistribution. These decentralized, local supply chains can offer alternative employment to waste picking. Cities can ease the transition to reuse by communicating these opportunities and providing alternative training to waste pickers and others whose livelihoods are impacted by the uptake of reuse.

Retailers/FMCGs

[As a significant driver behind the proliferation of single-use plastic](#), the fast-moving consumer goods (FMCG) industry bears a responsibility to make industry-wide changes and to consider the full lifecycle costs of single-use plastics. The FMCG industry must work in partnership with consumers, NGOs, and local and national governments to implement and scale reuse systems. Given the potential benefits of scaling reuse systems, the FMCG industry must step up efforts in the reuse space to ultimately decrease the total volume of plastic flowing through the system and ensure that durable materials remain in the system for as long as possible.

FMCG companies and retailers should work with solutions providers that allow reusable packaging to achieve the highest possible number of uses. Reusable packaging should achieve a number of reuse cycles that render the environmental impact of the reusable package (and the system it works within) smaller than that of the comparable single-use package so it does not simply add packaging to the material management system. This threshold may occur for some materials [in as little as two uses \(such as for stainless steel cutlery\)](#). For other packaging formats, the environmental break-even point may be over 100 uses. [Optimized reuse systems can allow packages to be reused more than 200 times; for the most durable material options, such as ceramic, steel, and glass, 1,000 uses can be achieved.](#)

Reuse systems must be designed in such a way that they enable consumer behavior, allowing people to easily obtain, use, clean when necessary, and return the package in order to drive up the number of uses a package achieves.

In addition to at least 30% reuse, FMCG companies should strive for reduction of fossil-based single-use plastic and towards a portfolio of 100% reusable, recyclable, or compostable plastic packaging. Reusable packaging should be designed to be recycled at the end of its useful life, and recycled to a product with the same functionality, e.g. reusable containers for food recycled at end of life into new food containers.

Industry Collaboration

Collaboration between private sector actors, policymakers, experts from the academic and NGO space, and other value chain players (logistics companies, clean/wash facilities, etc.) are vital in facilitating successful reuse systems at scale.

The development of a credible accounting system to measure the potential environmental benefit of reuse systems over the status quo is a necessity. As reusable packaging and reuse systems continue to scale there must be a standard method to account for reusable packaging as part of a company's footprint in a way that is fair, consistent, and transparent in order to compare the impacts of reuse to single-use, and measure improvement over time. Developers and users of such a methodology should approach this work in a closely collaborative way to ensure that the standard for corporate reuse accounting can be applied consistently across companies around the world and the results can be easily compared. WWF is actively engaged in this work and involved

in the leading multistakeholder forum on reuse accounting, [Consumers Beyond Waste](#) (facilitated by World Economic Forum).

There is a need for global knowledge sharing across the reuse community. Consumers Beyond Waste has developed [3 foundational sets of guidelines](#) that integrate all the major considerations for reusable containers and systems into one place. Reuse designers and practitioners should use these guidelines as guardrails for success. *The City Playbook*; *Design Guidelines*; and *Safety Guidelines* each provide specific recommendations for the implementation of reuse systems and together offer a framework for the integration and scaling of reuse projects around the world. See the attached 3-page supplement for more on the Reuse Guidelines.

WWF's Role in Accelerating and Scaling Reuse

Scaling successful reuse systems is an important strategy in reducing single use plastic consumption and ultimately reducing the threat of plastic pollution to wildlife, people and the ecosystems they live in. WWF works across the global plastic pollution crisis by engaging governments, business, and the public to develop and implement collaborative solutions. WWF builds networks among those working in the plastic space, conducts and amplifies the latest research, builds accountability in corporate plastic footprint tracking, and continues to raise awareness of the issue to a wide and influential audience.

As more reuse models come online at scale, WWF will work to provide an enabling landscape for these systems and will continue to develop measurement tools that can credibly account for the impact of reuse systems as compared to single-use. WWF has many ongoing reuse activities across thought leadership, multistakeholder collaboration, and communications.

The World Economic Forum's multistakeholder initiative, the Global Plastic Action Partnership is leading on the development of the [Reuse Portal](#), alongside WWF and the UN Environment Programme. This one-stop-shop collaboration platform serves to scale reuse solutions that address plastic pollution at the local, national, and global scales. Innovators, businesses, policymakers, activists, experts, consumers, and citizens are invited to engage and enjoy access to practical guidance, tools, and networks to shift from single use to reuse.

Conclusion

Reuse is an important strategy that must be pursued (in parallel with other strategies such as responsible sourcing of bioplastic and increased collection and recycling of plastic) to achieve a truly circular economy for plastics. It plays an important role in helping reduce the amount of material in the system and allows us to extend the life of our resources, keeping value in the system for as long as possible. Accelerating reuse models that are convenient, safe, affordable, and enjoyable, can help us reverse the underlying philosophy of the throwaway culture that has been dominant for decades. To ultimately achieve the reality of *No Plastic in Nature*, everyone - from companies and policymakers to cities and the public - must do their part to grow sustainable, accessible reuse systems.

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Additional Information: The Value of the Consumers Beyond Waste Reuse Guidelines

The World Economic Forum’s Platform for Shaping the Future of Consumption advances more responsible models of consumption for the benefit of business and society. The Platform’s Consumers Beyond Waste initiative brings together leading private- and public-sector actors committed to offering consumers aspirational, affordable, convenient and more sustainable alternatives to single-use plastic packaging. The initiative is specifically dedicated to accelerating innovative reuse solutions at scale.

In September 2021, the Consumers Beyond Waste initiative, made up of experts and stakeholders across the public and private sectors, published three community-authored papers to facilitate the market adoption of reuse models: The City Playbook; Design Guidelines; and Safety Guidelines. These guidelines provide clear and specific recommendations for reuse implementation and are referenced several times in the position above. WWF supported the development of the guidelines and endorses them as industry-leading guidance.

These guidelines acknowledge the importance of a shared set of best practices, laying the guardrails for a successful reuse system to thrive. They offer advice for a wide range of stakeholders—designers, policymakers, community leaders, and reuse-system providers—to design, develop, and implement innovative reuse models, bringing circular systems to scale across business operations and communities. With over 150 pages of direction, the guidelines offer the most credible and thorough recommendations to date, developed by an extensive group of diverse stakeholders committed to seeing reuse succeed. WWF highly recommends that designers, implementers, practitioners, policymakers, and supporters of reuse systems lean on the recommendations provided by these guidelines.

Design Guidelines

Developing reusable packaging that is more durable and able to withstand the wear and tear of repeated use, refill, cleaning, and shipping will require different considerations than packaging designed to be used only once. The Ellen MacArthur Foundation’s four reuse modalities (Refill at home, Refill on the go, Return from home, Return on the go) serve as a way to organize different reuse models in the guidelines.

The Design Guidelines integrate in one place the major components of reusable containers and systems that new and existing actors should take into account, including:

- considerations for material type, and the related sourcing and end of life impacts associated with different materials,
- how the reusable package interacts with the reuse system (e.g. design of container beyond material choice)
- artwork and labelling, and
- the role of technology in reuse

For reusable packaging and systems to compete with the convenience and affordability that single-use packaging offer, they must be designed to deliver on issues of consumer experience, public health and safety, and price. They must also overdeliver on questions of environmental performance in order to be a successful part of the plastic system moving forward. This document puts forth both recommendations for evaluating these factors and the questions that reuse practitioners should be asking.

For example, the Design Guidelines offer suggestions for how artwork and labels can be thoughtfully integrated into reusable packaging while still maintaining a high number of reuse cycles. Many brands heavily rely on the visual appeal of their product to attract consumers, as well as to communicate important information about their product. When transitioning a product from sale in a single-use container to a reusable one, it is important that these elements remain; however, practitioners must ensure they do not inadvertently limit the reusable function of the container. The Design Guidelines highlight several vital questions that must be considered for the system to be successful in the long run—such as, how frequent is the need to update artwork or labels, or is there a way to still communicate necessary information while maintaining the future versatility of the container?

The environmental criteria is an integral piece of the Design Guidelines, putting sustainability at the center of design for new and scaling reuse projects. An environmentally beneficial reuse system is one that reduces waste, pollution, and other environmental impacts as compared to single-use packaging. The environmental criteria section of the Design Guidelines explores the potential risks and opportunities of reusable packaging and systems across all relevant dimensions for a reusable package: sourcing, production, durability, transportation, use, and end of life. This section provides best practices, tools, and resources for each of these dimensions, enabling reuse practitioners to understand individual and collective impacts across their reuse systems. The Guidelines also include research that explores the sustainability considerations across common materials used for reusable packaging (stainless steel, engineered plastics, glass, and aluminum).

The Design Guidelines put forth recommendations for best-in-class reuse packaging and systems. They offer plenty of space for a diversity of innovative and exciting new reuse models to thrive within, helping reuse providers adopt systems that are engaging and easy for consumers to use.

Safety Guidelines

As explained in the WWF position above, health and safety dimensions of reuse systems are fundamental to their success. Business support for and public adoption of reusable packaging requires full compliance with health and safety regulations. Trust in the system, and respect and professionalism by the reuse providers are paramount for overall success.

The Safety Guidelines provide clear guidance on the necessary considerations for designing and implementing safe reuse systems to all those involved in the reuse ecosystem. This document compiles information and tools related to quality assurance, applicable policy, risk and compliance regulations, consumer engagement, communications and marketing, and all health and safety dimensions of supply chain operations. The Safety Guidelines primarily focus on cleaning, as the sanitization of reusable packaging is perhaps the most critical safety consideration, especially for ingested and topical packaging. The Safety Guidelines are material agnostic, acknowledging that the environmental, social, economic, and functional impacts of the materials chosen for reusable packaging depend on how such materials are sourced, used, and managed.

Again, as in the Design Guidelines, the four EMF reuse modalities are referenced throughout. Health and safety requirements do differ across product category, and some of the nuance between these different categories are explored in the guidelines.

The Safety Guidelines pose important operational questions that reuse practitioners must consider across the following dimensions: design, cleaning chemistry, the environment, recommendations for basic cleaning & inspection, filling, shipping & handling, and storage.

Evaluating a potential reuse system in reference to these operational considerations can provide the bedrock for a successful program.

Finally, the Safety Guidelines provide significant information on existing regulations and standards related to operational and product safety across different regions of the world.

City Playbook

The City Playbook is the third and final set of guidelines published by the Consumers Beyond Waste community. Despite occupying just 3% of Earth's surface, cities are home to more than half of the global population, providing a massive opportunity for reuse systems to operate successfully at scale.

Many cities have already set ambitious sustainability goals around waste reduction and are looking for ways to act on these goals; the scale of consumption and the waste generated by urban areas provide a huge opportunity for reuse to generate more sustainable behavioral patterns. In addition, cities serve as creative and cultural hubs, eager to drive transformational change that brings with it new economic and social opportunities, improving the quality of life of the local population. Finally, many cities already have highly-developed infrastructure and logistics that can be repurposed by reuse systems.

Adopting reuse at scale can help cities cut costs, create new jobs, and contribute to overall sustainability goals. Reuse is a natural pathway for cities looking to retain the value of resources circulating through their economy.

The City Playbook offers guidance for a successful transition away from single-use and toward reuse on a local scale. Municipal officials and local actors can use the action-oriented framework to design and implement reuse systems that can thrive in their communities. Local governments have an important role to play in the transition to reuse; their ability to establish policies that enable reuse to succeed, secure buy-in from the public, and build the necessary local infrastructure are critical for reuse systems to work.

The City Playbook is an essential tool for cities at varying stages of their reuse transition. By breaking down a phased approach based on reuse maturity, the playbook recommends different levels of intervention that can meet the specific needs of each city—whether that be guidance to develop new systems from scratch or to strengthen the impact of an already well-established system.

Leveraging the many factors that make cities ideal systems for testing and implementing reuse will require local governmental leaders to understand the value of reuse and commit to implementing models that are scalable and accessible to their communities. Collaboration between city officials and all other reuse stakeholders (companies, retailers, reuse solution providers, investors, logistics companies, etc.) will be necessary. The City Playbook provides these key audiences with guidance across the following areas: reuse strategy and program development; social, environmental and public health imperatives; stakeholder engagement; policy instruments; infrastructure; and procurement.

The City Playbook also provides a discussion of current challenges and opportunities, serving as a starting point to inspire collaborative action on the local scale.