



2023

# Reusable Transport Packaging

## State of the Industry Report



Reusable  
Packaging  
ASSOCIATION

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# Introduction

The three-year period between RPA's 2020 and 2023 State of the Industry reports shows a remarkable progression of evolving market trends and industry perspectives favoring the advancement of reusable transport packaging systems. Perhaps the most notable trend showing the leap forward is that 75% of survey respondents today believe that government regulations over the next five years will have a positive effect on demand in the market, up from 48% in 2020. This correlates with increasing public policy activities around the world where there is growing recognition among government officials and business leaders that reusing products needs to be part of the solution to combat environmental problems from single-use product waste.

Legislative initiatives only need to stimulate systems change away from generations of throwaway entrenchment in our economy and society to a new generation of resource preservation and value creation in the way we make, use, and manage the end of product utility. Governments can play an important role in jump-starting the intrinsic market forces and economic advantages of reuse. Taken together with the other market demand factors discussed in this report, the collective case for reusable packaging has never been stronger and more inspiring for our future.

The word "enterprising" comes to mind when thinking about the state of the reusable packaging industry. "Enterprising" is defined as "ready and energetic to undertake projects of importance or difficulty" and "characterized by great imagination or initiative." We are seeing enterprising activities everywhere as professionals and entrepreneurs are innovating reusable packaging product designs, collaborating with partners for operational scale, developing and deploying advanced technologies, and communicating experiences for market awareness and acceptance. This enterprising industry of reusable packaging has us looking not at what reuse can do today but rather what reuse can be tomorrow, and it is most promising that the best for reusable packaging is yet to come.



Tim Debus  
President & CEO  
Reusable Packaging Association

# Reusable Transport Packaging: Global Market Overview

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In 2023, the global packaging market reached an estimated \$1.1 trillion<sup>1</sup> in value. Within this broader global packaging market, approximately \$107 billion<sup>1</sup> meet the Reusable Packaging Association's criteria for reusable transport packaging (RTP): transport tertiary or secondary packaging designed and manufactured with the physical properties to ensure repeated and lasting uses in a system that features their recovery and return for the intended purpose.

In 2020, the broader global packaging market was valued at approximately \$950 billion<sup>2</sup>, implying a compound annual growth rate (CAGR) of 4.1% over the past three years. The global RTP market was valued at an estimated \$100 billion<sup>3</sup>, implying a CAGR of 5.7% over the same period. As indicated by these figures, RTP's share of the total global packaging market has increased since 2020. A variety of factors are driving the growth of RTP, the most impactful of which will be explored in detail within this report.



**The global reusable  
packaging market  
reached \$107 billion  
in 2023.**

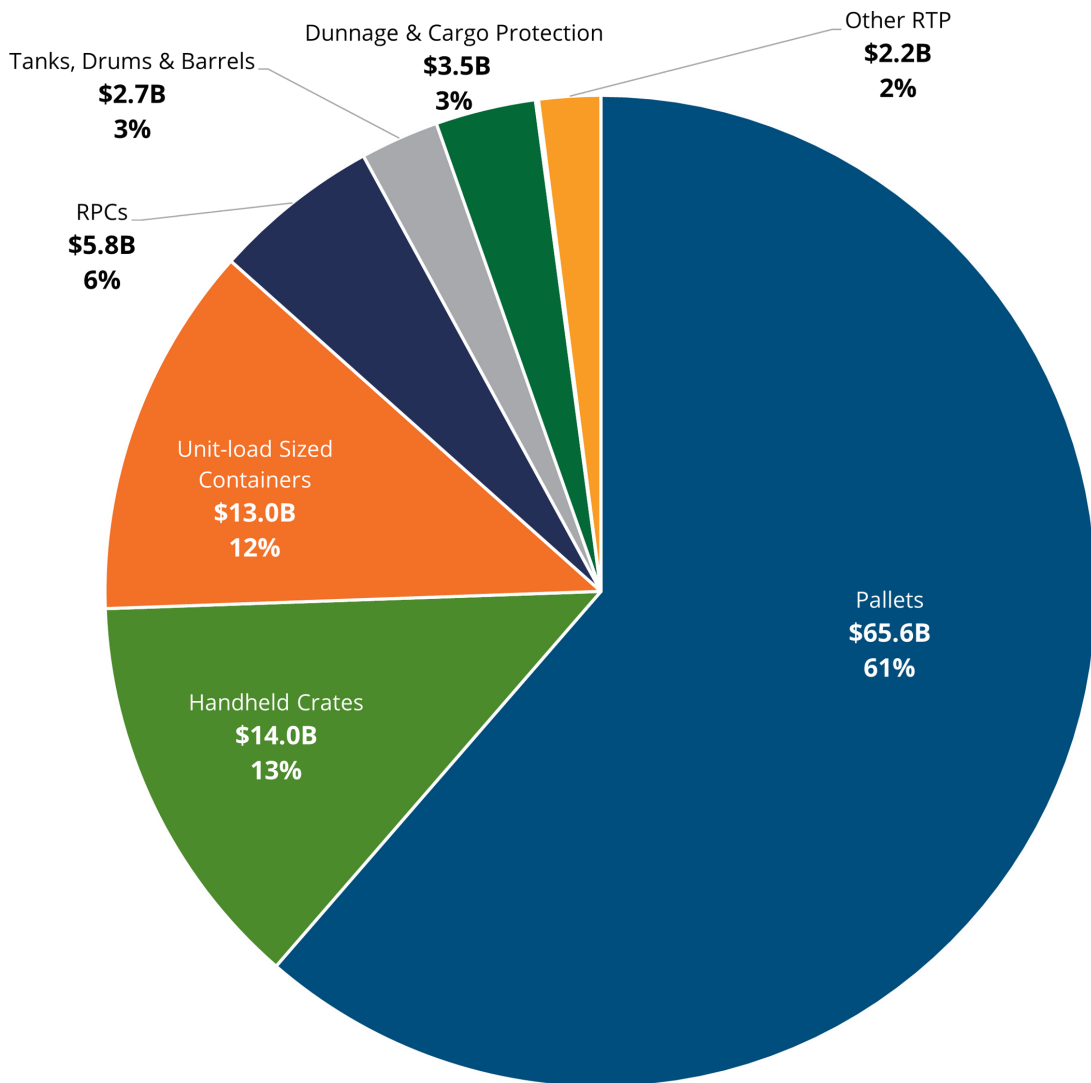
## Global RTP Market Segmentation by Packaging Type

Within today's \$107 billion RTP market fall a variety of packaging types: pallets; handheld crates (including totes, trays, and bins); reusable plastic containers (RPCs); unit-load sized containers, including

intermediate bulk containers (IBCs) and full-, half-, or quarter-pallet sized bins; tanks, drums, and barrels; dunnage and other cargo protection; carts and dollies; racks; and liners.

Each type of RTP plays an important role in adding both economic and environmental value to the supply chains in which they are utilized.

**Figure 1: Global RTP Market Size by Packaging Type**



Below are definitions of each type of RTP, its estimated 2023 global market size, and five-year growth estimates.



*Photo courtesy ALPAL*

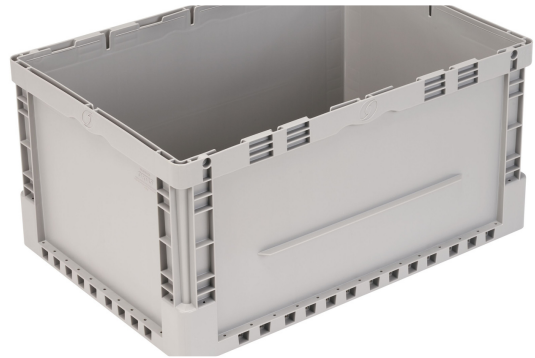
### Handheld Crates (including totes, trays, and bins)

Est. Global Market Size: 2023 - \$14B, 2028 - \$18.5B

This category contains handheld units, generically referred to interchangeably as “crates” or “totes”, some with open tops (no lids), made from plastic or other durable materials. Bins included in this category are no larger than what can be held by hand. Trays are handheld packaging units for lightweight items or small unit quantities that typically have a lower profile and an open top and side for access in a stacked arrangement (i.e. bread tray). In our 2023 online survey of RTP industry participants, 33% of Primary Users said they expected their companies’ use of containers/crates/totes to increase in the next 5 years; 44% expect no change, and the remainder were unsure.

Note: In our 2020 report we estimated this market to be \$17.7 billion. The apparent \$3.7 billion market size decrease for this category is merely the result of refined category definitions.

Our 2020 report’s product categories were not distinguished by size, thus the larger-than-handheld bin market was included in the “Crates” category. Since the publication of the 2020 report, RPA has determined that the handheld vs. unit-load size distinction is the most appropriate categorization for this and future market size calculations.



*Photo courtesy of Orbis*

### Reusable Plastic Containers (RPCs)

Est. Global Market Size: 2023 - \$5.8B, 2028 - \$7.7B

Containers that are specifically designed and used for the packing and transport of perishable food items from farm or food processing facilities to retail or food service establishments. In our 2023 survey, 78% of Primary Users said they expected their companies’ use of RPCs to increase in the next 5 years.



*Photo courtesy of Myers Industries*

### Pallets

Est. Global Market Size: 2023 - \$65.6B, 2028 - \$86.7B

Portable, horizontal, rigid, composite platforms used as a base for assembling, storing, stacking, handling, and transporting goods as a unit load (MH1-2016 standard). See [“What Is a Pallet?” by Packaging Revolution](#).

This is the largest RTP segment, including both pooled and one-way wood transactions, as all pallets even with varying degrees of durability are designed for extended reuse with repair options. In our 2023 survey, 78% of Primary Users said they expected their companies’ use of pallets to increase in the next 5 years.



Photo courtesy of [PLA](#)

### Unit-load Sized Containers (including IBCs, large bins, gaylords, etc.)

Est. Global Market Size: 2023 - \$13B, 2028 - \$17.2B

Reusable, multi-use industrial-grade containers, predominantly mounted on a pallet or designed for one-piece forklift use, for the mass handling, transport and storage of liquids, bulk solids and powders. In our 2023 survey, 66% of Primary Users said they expected their companies’ use of IBCs to increase in the next 5 years; the remainder expects no change.



Photo courtesy of [Orbis](#)

### Dunnage & Cargo Protection

Est. Global Market Size: 2023 - \$3.5B, 2028 - \$7.1B

Components used as part or alongside packaging to protect goods and unit loads during shipment. Dunnage such as dividers, inserts, and fillers can be placed inside the packaging to separate or secure goods and dunnage. Pallet wraps, straps, and airbags can be used on or in between pallet units for load securement during movement. Protective reusable dunnage replaces single or limited-use fillers or shrink wrap to pack products or move pallets securely. In our 2023 survey, 56% of Primary Users said they expected their companies’ use of reusable dunnage/cargo protection to remain unchanged in the next 5 years; 11% expect it to increase.

Note: In 2020 we estimated this market to be \$0.5 billion. The apparent \$3 billion market size increase from 2020-2023 is the result of recent availability of third-party data regarding this segment of the market. In 2020 data for this category was unavailable, so conservative estimates were made.



Photo courtesy of [CargoTuff](#)

### Tanks, Drums, & Barrels

Est. Global Market Size: 2023 - \$2.7B, 2028 - \$3.6B

Large packaging units, often made from steel, for the holding and transport of liquids, solids or powders in bulk that typically involve specialized fill and discharge technologies. In our 2023 survey, Primary Users were split: one third each said they expected their companies' use of tanks, drums, and barrels to increase, stay the same, and decrease in the next 5 years.



### Other RTP

Est. Global Market Size: 2023 - \$2.3B, 2028 - \$2.9B

RTP included in this category are:

#### *Plastic-corrugated Boxes, Panels, & Sleeves*

Plastic-corrugated packaging is constructed from extruded, twin-wall plastic sheets made from high-

impact polypropylene, polyethylene or other plastic resin varieties and formed with a similar makeup to corrugated fiberboard in which both upper and lower surfaces are supported by fluted ribs. A wide range of sizes and thickness can produce multiple reusable product types such as handheld boxes and bulk bins from rigid panels and sleeves. In our 2023 survey, 44% of Primary Users said they expected their companies' use of these products to increase in the next 5 years, another 44% don't expect any change, and the remainder were unsure.



Photo courtesy of [Technology Container Corp.](#)

### *Foam-based Transport Packaging*

High-density, closed-cell foam made from extruded polyethylene and polypropylene are used in transport packaging applications such as trays and dividers where lightweight material, compression strength, insulation and energy absorption characteristics are desired. In our 2023 survey, 33% of Primary Users said they expected their companies' use of these products to increase in the next 5 years, another 22% don't expect any change, and the remainder were unsure.



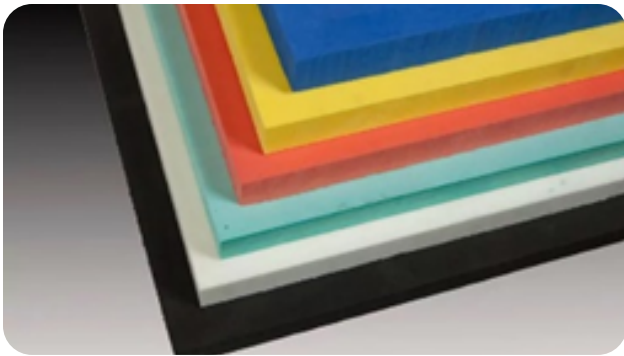


Photo courtesy of [Worldwide Foam](#)

*Racks*

Vertical structures that consist of several layers in the form of shelving for holding multiple items for moving and transport, often designed with wheels for unit mobility. In our 2023 survey, 33% of Primary Users said they expected their companies' use of these products to increase in the next 5 years, another 33% don't expect any change, 11% expect a decrease, and the remainder were unsure.



*Carts & Dollies*

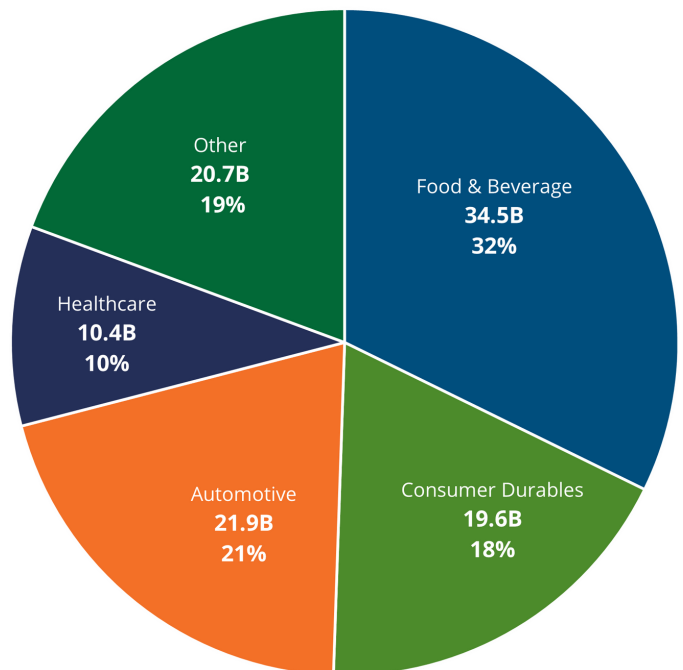
Industrial, roll-out carts are large mobile bins generally used for trash or residential solid waste collection and removal ranging from 16 to 91 gallons in capacity. Dollies are low, mobile platforms or carts typically with four wheels or casters that are used to

transport heavy items, which are often boxes or containers stacked with congruent dimensions to create a secure vertical load. In our 2023 survey, 22% of Primary Users said they expected their companies' use of these products to increase in the next 5 years and the remainder expect no change.

**Global RTP Market Segmentation by Application**

The Food and Beverage sector is the dominant user of RTP, accounting for approximately one-third of global market value. The Automotive sector is the second largest RTP user with nearly 22% of market share. Consumer Durables utilize 18% of RTP, Healthcare 10%, and a mix of other sectors combine to make up the remaining 19%.

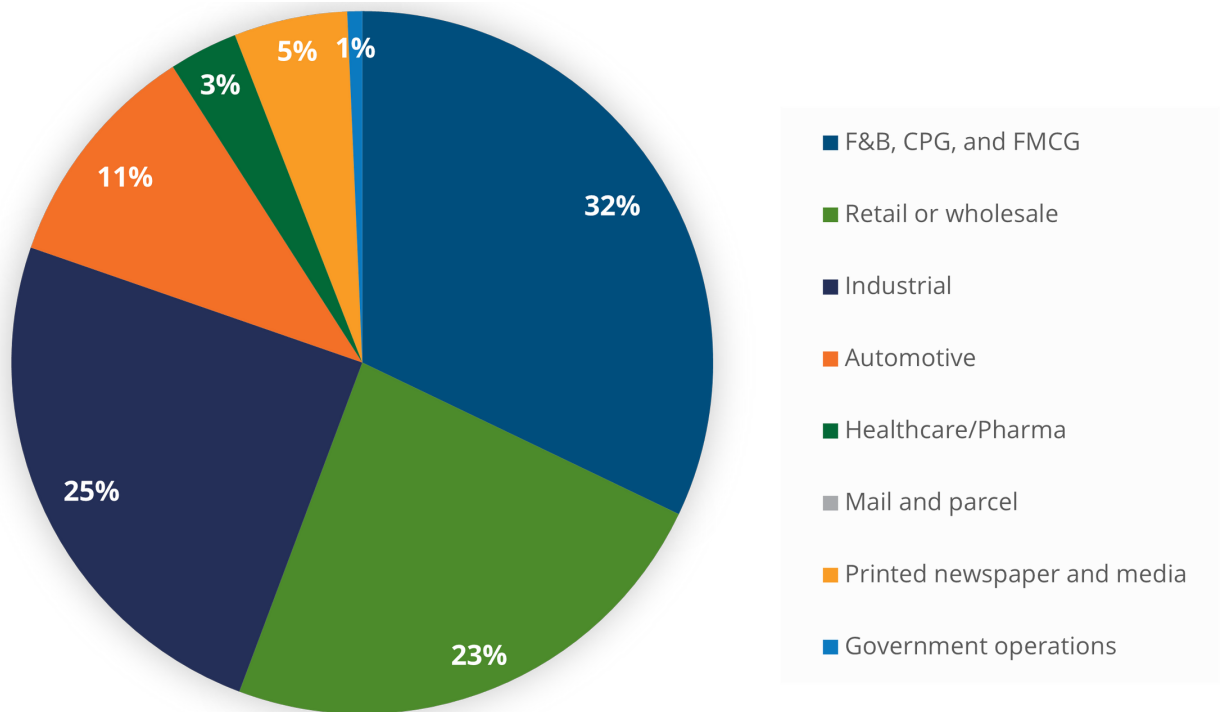
**Figure 2: Global RTP Market Size by Application**



To gain insight on a more granular level, our 2023 survey asked RTP Manufacturer & Pooler respondents, “Approximately what % of your company’s reusable packaging revenue comes from customers in the following industries...?”

The largest share (32%) of respondents' revenue comes from the Food & Beverage/CPG/FMCG verticals, followed closely by Industrial (25%), then Retail or Wholesale (23%). An average of 11% of respondents' revenue comes from the Automotive sector, and the balance from Healthcare/Pharma, Printed Newspaper and Media, and Government Operations.

**Figure 3: RTP Manufacturer and Pooler Survey Respondent Revenue by End User Industry**



# Reusable Transport Packaging Market Demand Factors

Demand for RTP has grown at a CAGR of 5.7% since 2020, driven by a variety of external factors. To better understand how demand for reusable transport packaging has changed in recent years and to help predict how demand will change in the future, RPA has identified eight key macro factors expected to have the greatest influence over the market for reusable products and services:

- Government Regulation and/or Mandates
- Compliance with Sustainability Commitments
- Automation
- Economic Factors
- Labor Availability
- Raw Material Availability
- Transportation Limitations or Costs
- Consumer Preferences

Respondents to our 2023 State of the Reusable Packaging Industry Survey were asked for their view on how each factor would impact demand for their company's reusable transport packaging products and/or related services.

With the exception of Consumer Preferences, respondents to our 2020 Survey were also asked these questions. The following section explores demand for RTP in general, as well as each individual factor alongside the respondents' views and how they have evolved since the 2020 survey.



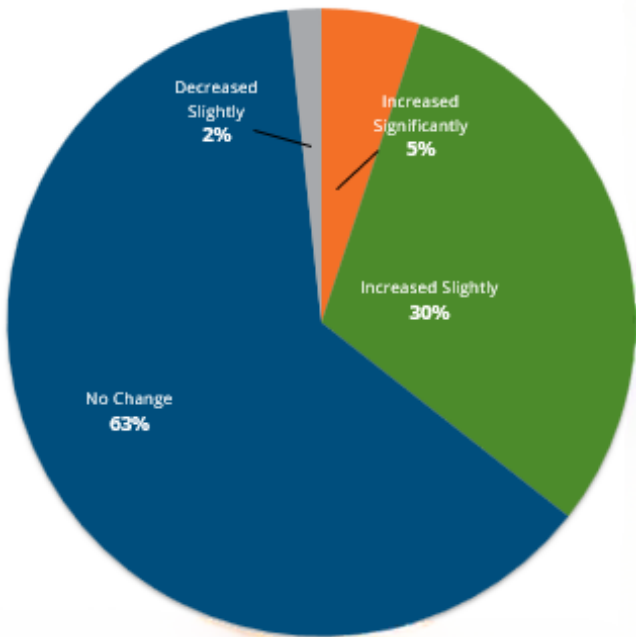
**Demand for RTP has  
grown at a CAGR of  
5.7% since 2020.**

### RTP Demand: Q2 2022 - Q2 2023

35% of Primary User survey respondents reported that their companies' use of RTP over the 12 months between Q2 2022 and Q2 2023 has increased, while 63% reported no change and 2% reported a decrease. (see Fig. 4)

In response to a question regarding demand for their RTP, 61% of Manufacturers and Poolers reported increased demand over the past 12 months, 13% had no change, and 26% reported a decrease (see Fig. 5).

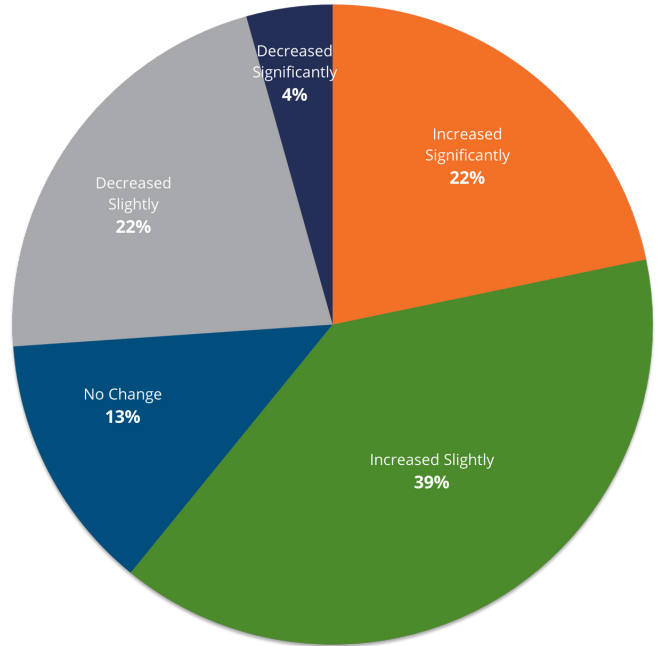
**Figure 4: Primary Users' Change in RTP Use, Q2 2022 - Q2 2023**



### Expected RTP Demand: 2023-2028

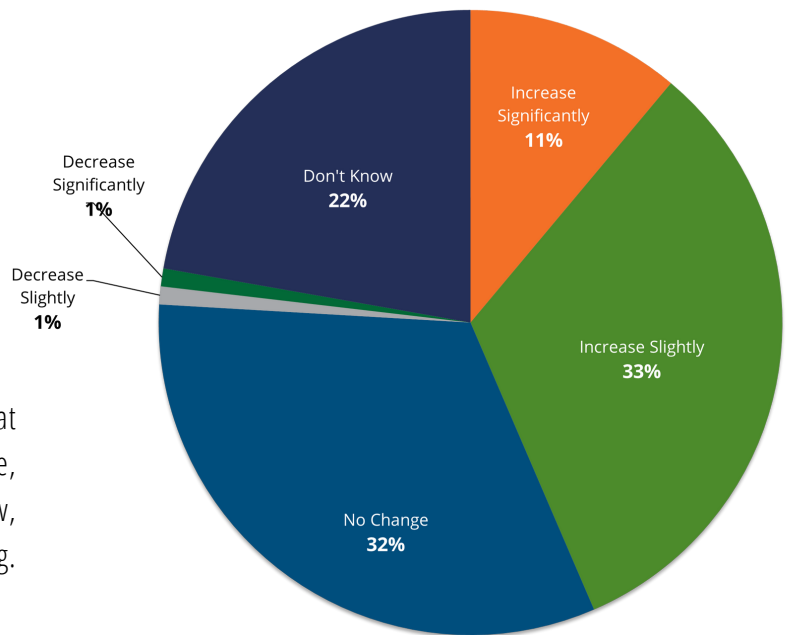
When Primary User respondents were asked how they expect their companies' demand for RTP to change over the next five years, 44% said that they expect their companies' use of RTP to increase, 32% said that it wouldn't change, 22% didn't know, and only 2% thought that it would decrease (see Fig. 6).

**Figure 5: Change in Demand for RTP Manufacturers and Poolers' Products and Services, Q2 2022 - Q2 2023**

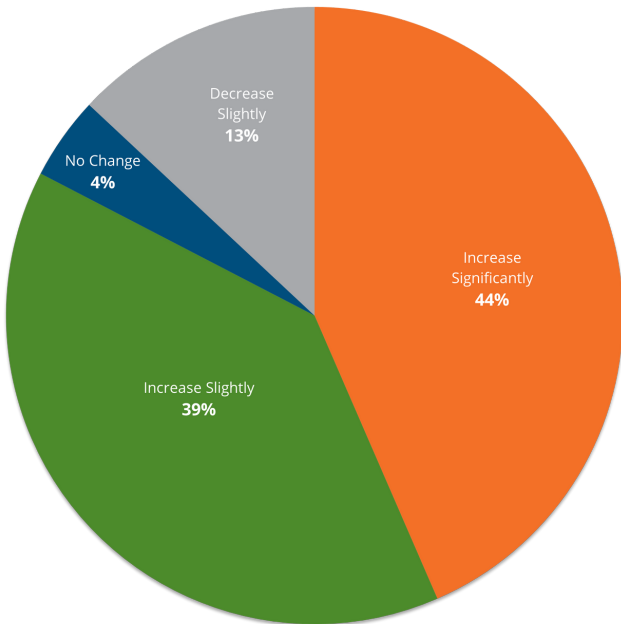


In response to a question regarding expected demand for their RTP, 83% of Manufacturers and Poolers said they expected demand to increase, 13% expected it to decrease, and 4% expected no change (see Fig. 7).

**Figure 6: Primary Users' Expected Change in RTP Use, 2023 - 2028**



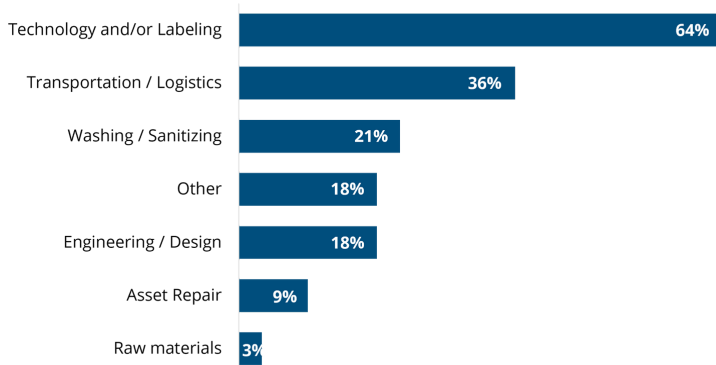
**Figure 7: Expected Change in Demand for RTP Manufacturers and Poolers' Products and Services, 2023 - 2028**



**RTP Industry Suppliers and Service Providers**

Our survey included respondents who identified themselves as a Supplier or Service Provider of one or more services to the RTP industry (see Fig. 8).

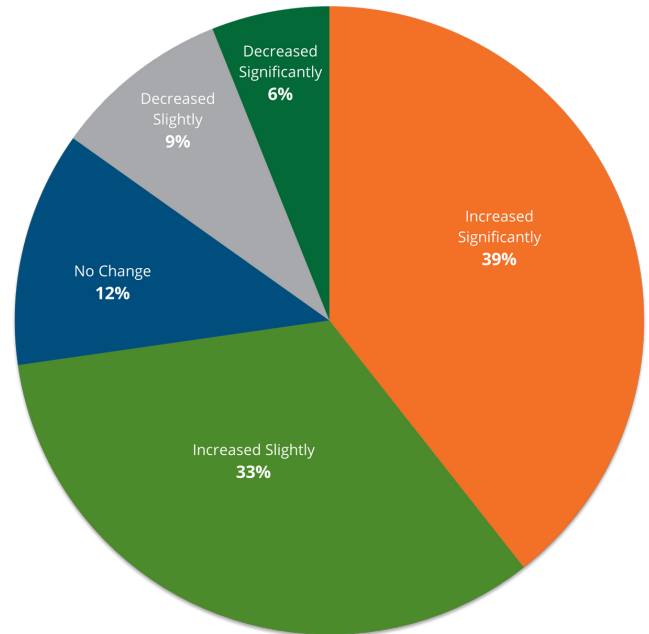
**Figure 8: Share of Respondents Providing Specific Services to the RTP Industry**



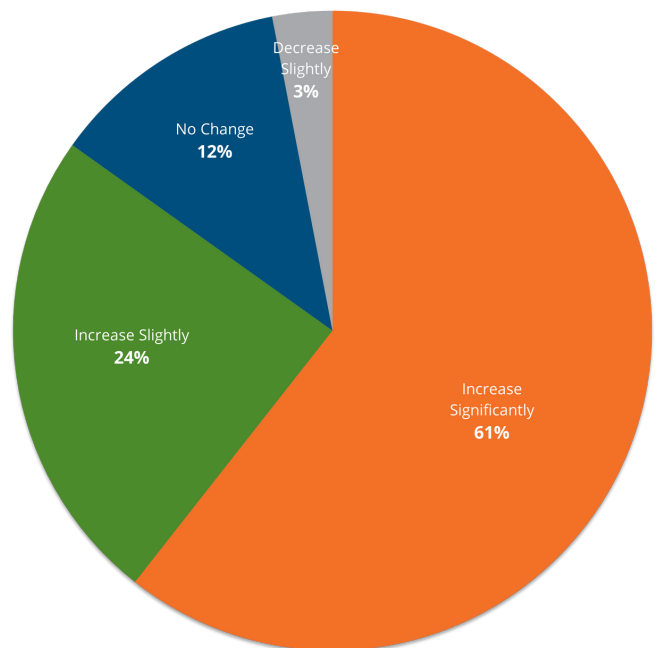
These respondents reported that the RTP industry accounts for an average of 50% of their revenue.

As demand for RTP increased, 72% of Suppliers said demand had increased over the past 12 months. 15% reported decreases, 12% no change (see Fig. 9). In the next 12 months, 85% said demand will increase, 12% no change, and 3% said it will decrease (see Fig. 10).

**Figure 9: Change in Demand for Industry Services, Q2 2022 - Q2 2023**



**Figure 10: Expected Change in Demand for Industry Services, Q2 2023 - Q2 2024**



## Government Regulation and/or Mandates

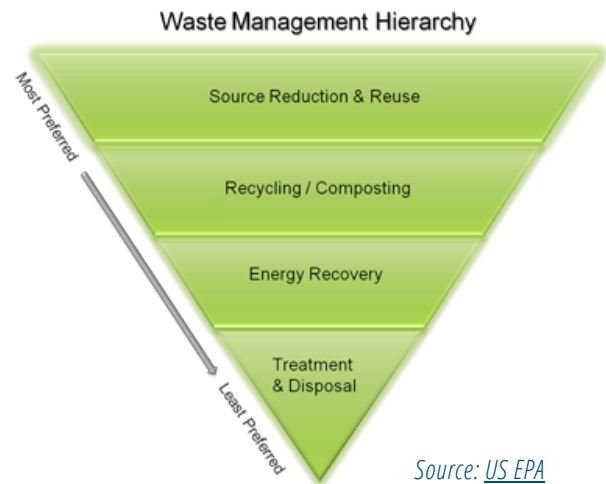
In the past, government regulations pertaining to packaging primarily revolved around product labeling, disclosing consumer information, and ensuring the safety of packaged contents. As time passed, the extent of government supervision over packaging became more tailored, taking into account the packaging's intended purpose, the materials used in its production, and the industry it served.

Nevertheless, in recent times, heightened awareness of the environmental repercussions associated with packaging, notably its role in generating solid waste and contributing to plastic pollution, has led to an intensification of government scrutiny and regulatory measures in nations across the globe.



Legislation limiting the use of disposable plastic shopping bags, for example, has become more widespread in the United States, where they have now been [banned in ten states and four territories](#). As of 2022, four U.S. States (California, Colorado, Oregon, and Maine) have enacted [Extended Producer Responsibility \(ERP\) laws](#).

Unfortunately, reuse is still too often lumped together with recycling, the latter almost always identified as the preferred alternative to landfill disposal, despite universal acknowledgment of [reuse as the preferred waste reduction action](#).



While recycling is an important component of any regulatory framework aimed at landfill diversion, the lack of policy differentiation between reuse and recycling makes such regulations less effective by treating waste prevention (reuse) activities the same as waste management (recycling). In other cases, narrowly-defined recycling targets may not “count” reuse initiatives towards meeting the recycling targets, effectively penalizing implementation of the more sustainable of the two models.

While countries have established waste reduction and recycling targets and outlined timeframes to achieve them, they mostly have fallen short of enacting legislation that meaningfully emphasizes reuse as a more impactful approach over recycling. One notable exception of this omission is the European Union, where specific reuse targets have been proposed and should have a direct, positive influence on the demand for reusable packaging.



## Packaging Regulation in the European Union

The European Commission has long been a global leader in legislative efforts to reduce solid waste. To this end, the EU released its [Circular Economy Action Plan](#) on March 11, 2020. In November 2022, as part of the European Green Deal and circular economy action plan, the Commission put forward a [revision](#) of The Packaging and Packaging Waste Directive (PPWD – Directive 94/62/EC) in November 2022.

The initiative's objective moves beyond its original emphasis on recycling and waste diversion, ensuring all packaging is reusable or recyclable in an economically feasible way by 2030. The revision is aimed at ensuring packaging reuse and recycling, boosting the uptake of recycled content, and improving the requirements' enforceability.

The proposed changes include targets for reusable packaging adoption for both consumer packaging and transport packaging alike. For example, 90% of large appliances should be delivered in reusable packaging by 2030. As of the start of 2023, four U.S. states currently have Extended Producer Responsibility laws. These laws require producers to take responsibility for their packaging waste by funding - and sometimes overseeing operations for- local recycling programs.

**Figure 11: Reuse and Refill Targets from the Revision of the EU Packaging and Packaging Waste Directive**

	From 1 January 2030	From 1 January 2040
<b>Large household appliances</b> (such as refrigerators, freezers, washing machines, clothes dryers or dish washing machines)	Share of products made available in reusable transport packaging <b>90 %</b>	
<b>Cold or hot beverages</b> (filled into a container at the point of sale for take-away)	Share of beverages made available in reusable packaging or by enabling refill <b>20 %</b>	Share of beverages made available in reusable packaging or by enabling refill <b>80 %</b>
<b>Take-away ready-prepared food</b> (intended for immediate consumption with no need of any further preparation, and typically consumed from the receptacle)	Share of products made available in reusable packaging or by enabling refill <b>10 %</b>	Share of products made available in reusable packaging or by enabling refill <b>40 %</b>
<b>Alcoholic beverages</b> (beer, carbonated alcoholic beverages, fermented beverages other than wine, aromatised wine products and fruit wine, products based on spirit drinks, wine or other fermented beverages mixed with beverages, soda, cider or juice)	Share of products made available in reusable packaging or by enabling refill <b>10 %</b>	Share of products made available in reusable packaging or by enabling refill <b>25 %</b>
<b>Wine</b> (except sparkling wine)	Share of products made available in reusable packaging or by enabling refill <b>5 %</b>	Share of products made available in reusable packaging or by enabling refill <b>15 %</b>
<b>Non-alcoholic beverages</b>	Share of products made available in reusable packaging or by enabling refill <b>10 %</b>	Share of products made available in reusable packaging or by enabling refill <b>25 %</b>
<b>Transport packaging</b> (pallets, plastic crates, foldable plastic boxes, pallets and drums for conveyance or packaging)	Share of packaging used that is reusable <b>30 %</b>	Share of packaging used that is reusable <b>90 %</b>
<b>Transport packaging (e-commerce)</b> Operators using transport packaging for the transport and delivery of non-food items sold via e-commerce	Share of such packaging used is reusable packaging <b>10 %</b>	Share of such packaging used is reusable packaging <b>50 %</b>
<b>Transport packaging (pallet wrappings and straps)</b>	Share of such packaging used that is reusable packaging <b>10 %</b>	Share of such packaging used that is reusable packaging <b>30 %</b>
<b>Grouped packaging</b> (boxes, excluding cardboard, used outside of sales packaging to create a stock-keeping unit)	Share of such packaging used is reusable packaging within a system for re-use <b>10 %</b>	Share of such packaging used is reusable packaging within a system for re-use <b>25 %</b>

Source: European Parliament

## Packaging Regulation in the United States

While the EU has proposed substantive reuse goals as a proactive measure to combat solid waste and plastic pollution, government activities in the U.S. continue to focus on recycling, and more recently, packaging reduction.

The law firm Morgan Lewis notes in a [March 2023 article](#) that two legislative solutions to combat plastic pollution have emerged: (1) encouraging “advanced recycling,” a process that strips plastics down to their chemical form for reuse; and (2) limiting and reducing plastics consumption.

Over the past five years, 20 states have passed laws aimed at encouraging advanced recycling.

Increasingly, there are also initiatives at the state and local level to reduce single-use plastics. Targeted items include plastic shopping bags as well as plastic straws, stirrers, foam cups, and takeout containers. As mentioned above, ten states have banned shopping bags. Local governments including Malibu, Berkeley, Seattle, Charleston, and Miami Beach have banned plastic straws. Expanded polystyrene has been banned in more than one hundred municipalities and cities.



California has passed extensive legislation (SB-54) that covers both the reduction of plastics and plastics recycling. The legislation sets targets for reducing single-use plastic by 25% by 2032 and reducing expanded polystyrene by 25% by 2023. Additionally, at least 30% of plastic items sold or purchased in California must be recyclable by 2028. By 2032, 65% of all plastic items distributed or sold in California must be recyclable.

As of 2023, five U.S. states currently have Extended Producer Responsibility laws. These laws require brands to take responsibility for their packaging waste by funding - and sometimes overseeing operations for - local recycling programs.



“While such initiatives are promising, they are still in their infancy compared to more proactive European legislation aimed at dramatically reducing the usage of single-use packaging. However, as a representative from a large multinational FMCG company noted in an interview for this report, for global companies, the impact of new packaging legislation isn’t isolated to the country or region in which they’re enacted.

For multinationals, packaging regulations in one operating region result in changes across all regions as companies seek operational consistency across global supply chains. Thus, we can expect the impact of these European regulations to be felt in North America as well.

“ **For multinationals, packaging regulations in one operating region result in changes across all regions.** ”

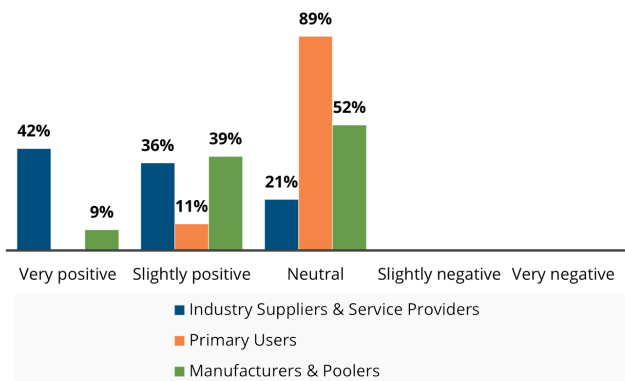


**75% of survey respondents expect government regulations to increase demand for RTP.**

**The Industry Speaks: Government Regulations and the RTP Market**

In 2020, half of all survey respondents said they expected government regulation to increase demand for reusables over the next five years. The results of our 2023 survey suggest that government action in this regard has been slower than expected, as less than half of RTP Manufacturers and Poolers said regulations had increased demand for their products, and only 11% of Primary Users said regulations had increased their company’s use of reusable packaging; 89% said it had no impact.

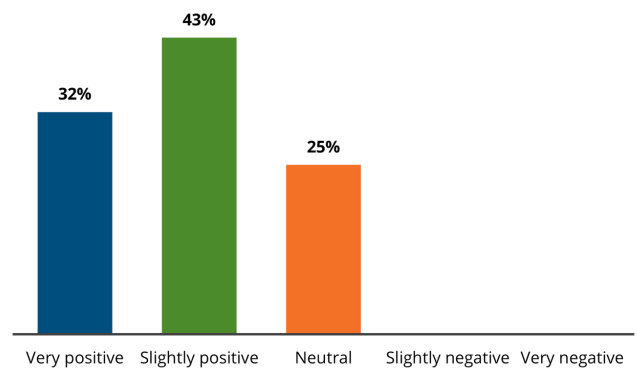
**Figure 12: Impact of Gov't Regulation on Demand for RTP by Respondent Group 2020 - 2023**



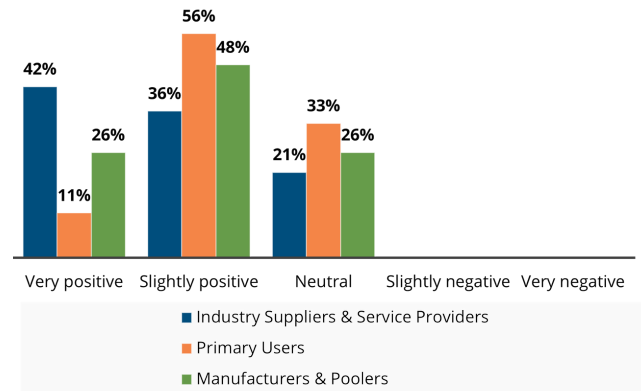
However, when asked about their expectations for the next 5 years, 75% of all respondents said they expect government regulation to have a positive impact on demand for RTP (see Fig. 13).

This sentiment was fairly consistent between respondent groups: 78% of Suppliers and Service Providers, 74% of Manufacturers and Poolers, and 67% of Primary Users agreed with this sentiment (see Fig. 14).

**Figure 13: Expected Impact of Gov't Regulation on Demand for RTP 2023 - 2028**



**Figure 14: Expected Impact of Gov't Regulation on Demand for RTP by Respondent Group, 2023 - 2028**



## Compliance with Sustainability Initiatives

Corporate sustainability initiatives have become increasingly prevalent in recent years as businesses recognize the importance of integrating environmental, social, and governance (ESG) considerations into their operations. These initiatives aim to address sustainability challenges, mitigate negative impacts, and create long-term value for both companies and society. ESG is a set of standards for a company's operations in which conscious investors use to screen potential investments for risk mitigation objectives. It's becoming increasingly common for companies to be assessed on these criteria alongside traditional financial metrics.

Environmental criteria consider how a company performs as a steward of nature. It includes energy use, waste, pollution, natural resource conservation, and animal treatment. Companies are also scrutinized on how they manage their environmental risks.



Social criteria examine how a company manages relationships with employees, suppliers, customers, and the communities where it operates. It can encompass things like working conditions, health and safety, diversity and inclusion, and employee engagement.

Governance deals with a company's leadership, executive pay, audits, internal controls, and shareholder rights. It also considers the company's adherence to business ethics and transparency.



Reusable transport packaging can significantly help companies meet their ESG goals in the following ways:

*Environmental:* Reusable transport packaging reduces the need for single-use packaging materials, thus reducing waste and pollution. It can also lower energy consumption as reusable packaging can often be more durable and efficient to transport, reducing the overall carbon footprint. This can be an important improvement, as a recent [McKinsey survey](#) of 40 of the world's largest grocers and their value chains found, scope 1 and 2 emissions only account for about 7 percent of the total, while about 93 percent of emissions (scope 3) are outside grocers' direct control.

*Social:* Reusable transport packaging can contribute to improved working conditions by reducing the handling of disposable packaging waste, which can potentially improve worker safety, as well as other ergonomic design features. In addition, companies that prioritize reusable packaging can signal to their customers and communities that they are committed to sustainability.

*Governance:* The decision to switch to reusable transport packaging demonstrates a proactive approach to risk management, particularly in the face of increasing regulatory pressures around waste and disposal. It also shows a commitment to sustainable operations, which can enhance a company's reputation and relationship with its stakeholders.

Overall, integrating reusable transport packaging into a company's operations can be an effective part of a broader strategy to improve ESG performance and meet sustainability targets.



One example of integrating reusables into ESG initiatives is [PepsiCo's goal](#) to double the proportion of beverage servings provided in reusable or refillable packaging to 20%, from 10% currently, by 2030. Another example is from Kroger's [2022 ESG Report](#):

*Kroger continues to use reusable solutions in our supply network. We use reusable plastic containers and crates to move produce, meat, eggs, milk, and other fresh items through our distribution centers and stores. We partner with third-party providers to support and expand our adoption of these pooled resources.*



And another from Walmart's [2022 ESG Report](#):

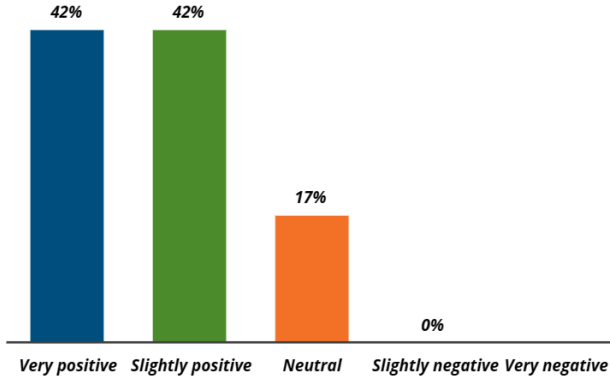
*We joined the US and Canada Plastics Pact as part of the Ellen MacArthur Foundation's initiative to create a circular economy for plastics. In 2021, 58 percent of our private brand packaging was recyclable, reusable, or industrially compostable, up from 54 percent the prior year, toward our goal of 100 percent by 2030.*

### The Industry Speaks: Sustainability Initiatives and the RTP Market

In 2020, 95% of all survey respondents said they expected sustainability initiatives to increase demand for reusables over the next five years. In our 2023 survey, 84% still felt this way about the coming five years (see Fig. 15). Only one-third of Primary Users said that compliance with sustainability commitments had increased their company's use of RTP over the past three years (see Fig. 16), but twice that number said they expect it to increase their use in the coming five years (see Fig. 17).

**84% of survey respondents expect sustainability initiatives to increase demand for RTP.**

**Figure 15: Expected Impact of Sustainability on Demand for RTP 2023 - 2028**



Across our primary user interviews, we heard again and again how sustainability is driving their demand for reusable packaging, and why:

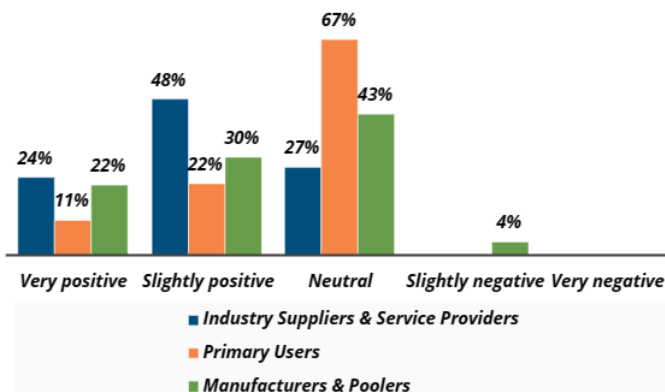
*I think [adoption is being driven by] understanding the impact. People are now realizing returnable packaging is a better choice for the environment.*

*When we go to present our business cases to our senior leadership, we also look at the sustainability impact, the carbon impact, how many trees, logs, and paper we're saving by using a returnable packaging solution versus corrugate...*

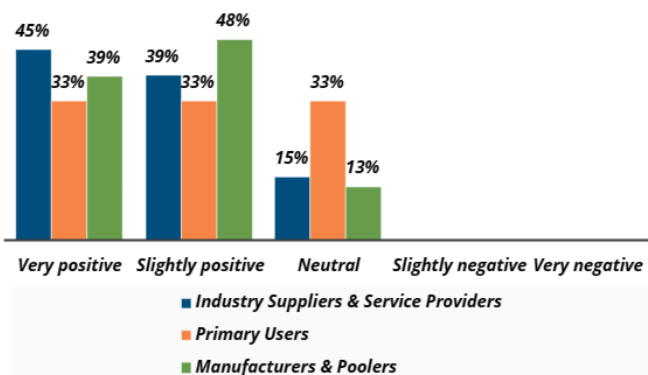
*...the main driver(s) when we go to reusables [are] sustainability, reduction of waste, and product protection.*

*...sustainability is one that is going to be, I believe, a key driver. And the point that this sustainability target, being translated into a law in Europe, is going to have a big influence, [it] is going to make a big impact overall.*

**Figure 16: Expected Impact of Sustainability on Demand for RTP by Respondent Group 2020-2023**



**Figure 17: Expected Impact of Sustainability on Demand for RTP by Respondent Group 2023 - 2028**



**“ People are now realizing returnable packaging is a better choice for the environment. ”**  
 - Primary User Interviewee

## Automation

Automation and reusables have a long history as a dynamic duo. As warehouse automation scales rapidly, experts predict reusable packaging will most certainly go along for the ride. As one of our primary user interviewees stated most succinctly regarding the future outlook, “[Use of reusable packaging] is going to be higher because automation is going to be greater.”

This partnership is not a new one. For example, the precision and consistency of car part placement in reusable packaging has been integral to accurate part handling by robots in automotive assembly. Likewise, the use of dimensionally accurate and rigid reusable pallets has been integral to the smooth operation of automated storage and retrieval systems for decades.

Today automated systems have now rapidly expanded their utilization of handheld crates, including totes, trays and bins in micro fulfillment investments in retail, ecommerce and other industries. With automation currently scaling at an unprecedented rate, the rapidly increasing adoption of automated storage, handling, and order fulfillment systems is expected to fuel the increasing demand for reusables.

“  
**Use of reusable packaging is going to be higher because automation is going to be greater.**  
- Primary User Interviewee  
”



According to [Research and Markets](#), over 80% of warehouses had automation in 2021, but things are changing. Next Move Strategy Consulting estimates the [global warehouse automation market](#) will increase from \$19.88 billion in 2022 to \$54.60 billion by 2030. Drivers such as the rise of ecommerce, lack of warehousing capacity, supply chain disruptions, labor shortages, nearshoring, and the desire for faster, more accurate fulfillment have helped fuel the growth.

### **Packaging selection can impact the performance of automated systems**

Many automated systems have limited tolerance for variance in packaging performance and specification, and so reusable packaging is typically a preferred alternative. For example, a slightly out-of-square broken or sagging pallet might cause it to jam in equipment, as might a container that is susceptible to deformation. Chips from pallets or fiber debris from containers can also compromise the performance of automation, and in the case of food production operations, create a sanitation concern.

And while durable, feature-rich and high-performance packaging can cost more compared to single-use disposable packaging, reuse models extending the product value allow companies to realize a lower overall cost per use over the reusable product's lifetime.



### Automation and reusable packaging trends

One emerging best practice has been the co-design of packaging and automated systems. In the past, automated system engineers have not always considered reusable packaging during the design process. As a result, providers have had to retroactively create custom packaging solutions to fit these automated systems, often needlessly increasing cost. Increasingly, packaging and automation designers are working collaboratively throughout the process to minimize solution costs.

As industries look to further digitize toward increasing visibility, IoT-enabled packaging will become more attractive. Because of reusable packaging durability, the cost of installing IoT technology becomes more affordable on a per-trip basis.

Automation has become particularly popular in applications such as the perishables sector where gentle handling, superior product protection, and throughput speed are crucial. The use of reusables eliminates moisture absorption problems associated with corrugated packaging while providing necessary drainage and ventilation. Companies around the world such as EDEKA (Germany), SOK (Finland), Mercadona (Spain), Shufersal (Israel) and Kroger (USA) have turned to automated perishable goods handling. As a result, RPCs and other reusables have become containers of choice.

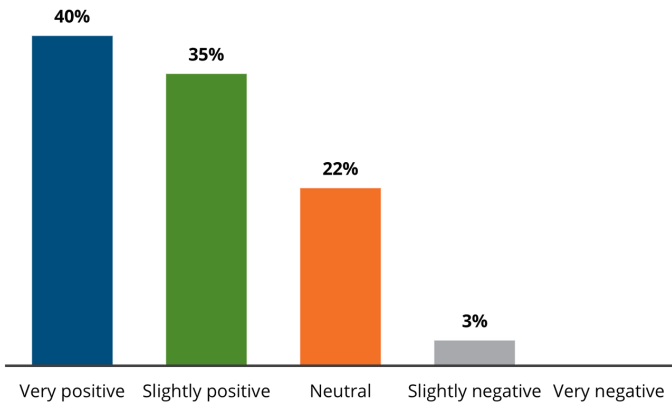
“Perishable food has to be treated differently in the handling process—from the field to the shelf—in order to guarantee its freshness,” states [Francisco López](#), Mercadona’s Managing Director of Logistics and Fruit and Vegetables Purchasing. “This requires a fundamental change to our supply chain. The new robotic systems we are implementing guarantee minimal handling time and therefore optimum product freshness.”

**75% of survey respondents expect automation to increase demand for RTP.**

### The Industry Speaks: Automation and the RTP Market

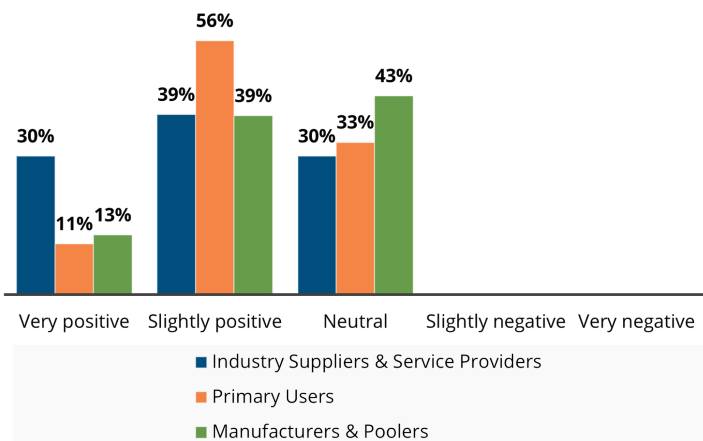
In 2020, 81% of all survey respondents said they expected automation to increase demand for reusables over the next five years. The results of our 2023 survey confirm this assessment, 75% of all respondents agreed (see Fig. 18).

**Figure 18: Expected Impact of Automation on Demand for RTP, 2023 - 2028**

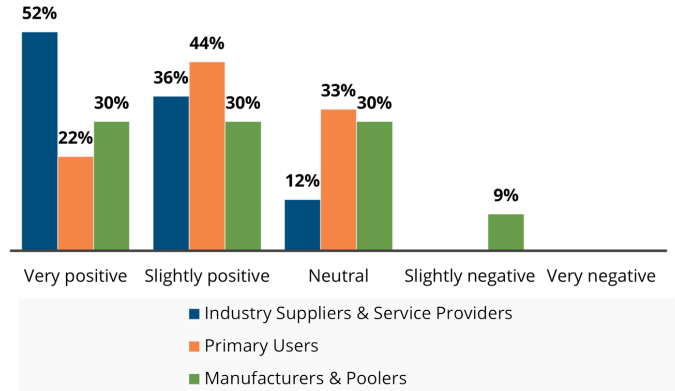


Two-thirds of Primary Users said automation had increased their company's use of RTP in the past three years (see Fig. 19), and the same number expect it to continue to drive increased use over the coming five years (see Fig. 20). Similarly, just over half of reusable packaging Manufacturers and Poolers said automation had increased demand for their products over the past three years, and 60% believe it will increase demand in the coming five years.

**Figure 19: Impact of Automation on Demand for RTP by Respondent Group, 2020 - 2023**



**Figure 20: Expected Impact of Automation on Demand for RTP by Respondent Group 2023 - 2028**



## Economic Factors

As global economies struggle with inflation, flagging consumer demand, rising interest rates, and other economic headwinds, the urgency to rationalize supply chains and cut costs is growing. While reusable packaging may not generate the buzz of other cost-reduction initiatives such as automation and AI, it remains an important opportunity. Reusables can provide several financial benefits that make them a compelling choice versus single-use packaging options.

### *Packaging material cost reductions*

Even though high-performance reusable packaging may be more expensive to create than disposable packaging, it typically ends up being more economical on a per-use basis over its lifetime.

### *Reduced waste management costs*

Reusables generate less waste than single-use packaging, resulting in lower disposal fees and requiring less labor associated with handling material for disposal or recycling.

### *Improved ergonomics and worker safety*

Improved safety performance can result in fewer Workers' Comp claims and lower insurance costs. Reusable packaging is designed to eliminate safety risks such as box cutting as well as to improve ergonomics through handle placement, access doors, and other features (see ESG section).

### *Facilitating automation*

Reusables help facilitate automation by providing economic benefits in terms of throughput speed, productivity, and inventory accuracy gains, as well as through improved storage space and labor utilization.



### *Retail sales boost*

When used at retail, reusable packaging designed for placement in retail display fixtures or modular pallets to promote floor displays has been proven to create visual appeal and boost sales.

### *Quality improvements*

Sturdy reusable packaging has been shown to reduce physical damage to products they hold during transit and handling versus expendable packaging, while container ventilation helps reduce the cooling time for perishables, prolonging freshness and shelf life.



### *Transportation and storage efficiency*

Intentional design for optimal stacking allows for products packed in reusables to more fully cube trailers and improve freight utilization, and also to increase safe stacking height in storage. For example, the use of RPCs for the shipment of case-ready meat [can improve transportation and storage efficiencies by 25%](#). Reusables can also help improve transportation efficiency by improving the return ratio of empty reusables through nestable or collapsible design.

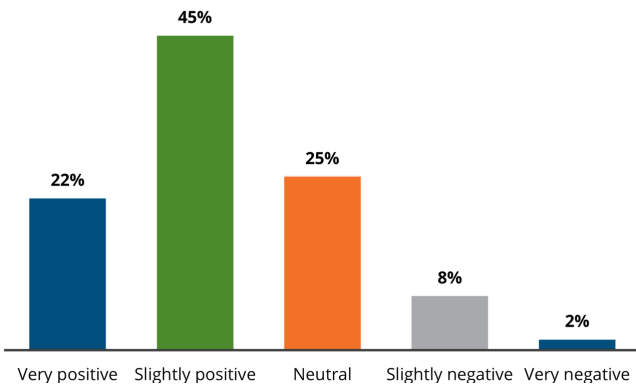
**67% of survey respondents expect economic factors to increase demand for RTP.**

## **The Industry Speaks: Economic Factors and the RTP Market**

In 2020, 62% of survey respondents said they thought economic factors would increase the use of RTP over the next five years. In our 2023 survey, two-thirds of respondents felt this way (see Fig. 21). When looking back over the past three years, 44% of Primary User respondents said that economic factors had in fact increased their company's use of RTP, the same

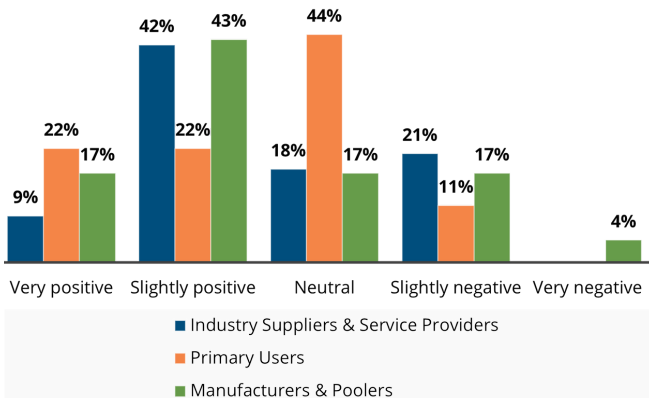


**Figure 21: Expected Impact of Economic Factors on Demand for RTP, 2023 - 2028**



amount said these factors hadn't changed their use, and 11% said it had a negative impact on their use (see Fig. 22). In addition, 60% of RTP Manufacturers and Poolers felt economic factors had positively impacted their business since our last survey, 21% felt these factors had a negative impact, and 17% felt they'd had no impact.

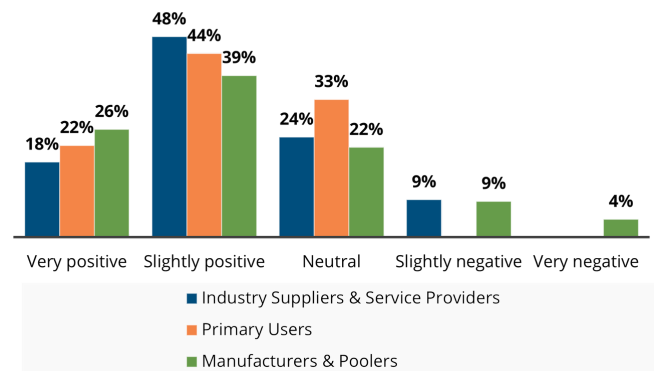
**Figure 22: Impact of Economic Factors on Demand for RTP by Respondent Group, 2020 - 2023**



Looking ahead, two-thirds of Primary Users said they expect economic factors to increase their use of RTP in the next five years, and the other third said these factors wouldn't have an impact (see Fig. 22).

At the time this survey was conducted (April-May 2023), many respondents were/are facing high inflation and soaring interest rates. Amidst this economic uncertainty, Primary Users recognize the economic benefits of RTP and signal their expectations that the increased use of RTP will help their companies navigate cost pressures in the future.

**Figure 23: Expected Impact of Economic Factors on Demand for RTP by Respondent Group, 2023 - 2028**



The knowledge that many Primary Users see economic factors as a driver of RTP use should be a welcome insight to RTP Manufacturers and Poolers, as 22% felt there would be no impact, and 13% felt there would be a negative impact.

“ We benchmarked other companies to see what they were doing with their packaging. [We learned] profitable companies who have been around for decades have as much returnable packaging as possible. ”

- Primary User Interviewee

## Labor Availability

The ongoing labor shortage that became exasperated in the wake of the COVID-19 pandemic and the Great Resignation has shown a glimmer of improvement as the economy slows. Nonetheless, labor supply is expected to be an ongoing concern in the years ahead.

“The economy is slowing, and the Federal Reserve is hiking interest rates at the fastest pace in decades,” writes [Aki Ito](#). “By any objective measure, the balance of power in the job market should be tipping back to employers. Strangely, though, it isn't. Ask pretty much anyone who's hiring these days, and they'll tell you something curious: It remains incredibly hard to find and hire enough qualified people for the roles they're desperately trying to fill.”

Immigration restrictions, baby boomer retirements, reshoring, and a reduced fertility rate all set the stage for a continued tight labor market. In spite of the current economic slowdown, [U.S. job growth remains strong in 2023](#) (see Fig. 24).

**Figure 24: Monthly US Job Creation, January 2022 - March 2023**

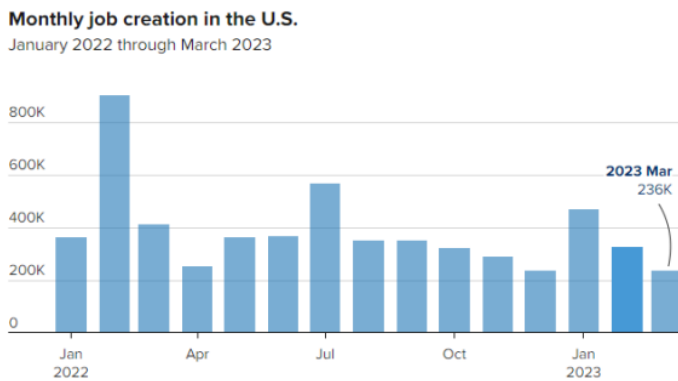


Chart: Gabriel Cortes / CNBC  
Source: U.S. Bureau of Labor Statistics via FRED  
Data last published April 7, 2023



Reusable packaging plays a role in helping companies better address their staffing issues in three ways. Firstly, the use of reusables can improve worker safety and ergonomics. Secondly, it helps improve the sustainability of companies, which has been shown to be an important consideration for employee recruitment. And finally, reusables can help facilitate conversion to automated systems, as mentioned earlier in this report, which will help eliminate pressure to fill new jobs and create better jobs for existing workers.



## Improved ergonomics and workplace safety

Safety has been found to be an important consideration for employee retention. [The 2022 Health & Safety Leadership Survey](#), conducted by Ontario’s Workplace Safety & Prevention Services (WSPS) received more than 1,500 responses. The business case for safety and sustainability is clear, it concluded, commenting that “Organizations that want to remain sustainable, attract top talent, protect employees, and improve business outcomes are investing in health and safety as a strategic priority.”

Reusables offer many features that promote worker safety through features such as handholds and access doors. They also eliminate the need for box cutters required to open corrugated containers and promote unit load stability during handling and storage. They also generate less debris and packaging waste, thereby reducing the threat of slip and fall injuries.

**Improved environmental performance**

Reusable packaging is associated with lower solid waste generation and an overall lower environmental footprint overall than for disposable packaging. Having a more sustainable workplace and brand is an important consideration for a significant number of employees and prospective hires. [KPMG UK](#) found that 46% of people want the company they work for to demonstrate a commitment to ESG. One in five candidates had turned down a job offer because the organization’s ESG strategy did not meet their expectations.



**Automation**

As discussed previously, reusable packaging plays an important role in enabling material handling automation. Automation helps reduce staffing needs as businesses grow while improving workplace conditions for employees working with automation.

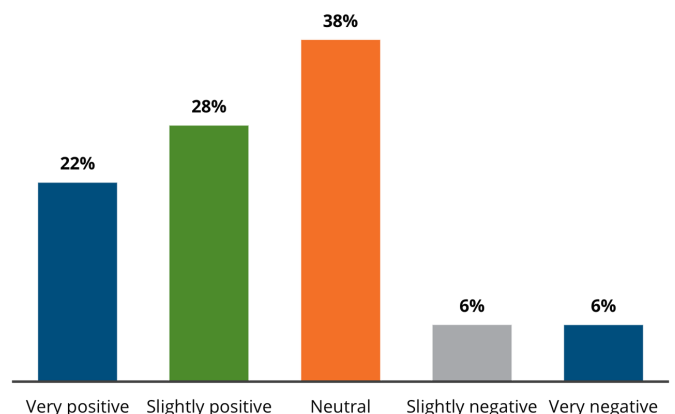
**50% of survey respondents expect labor availability to increase demand for RTP.**

**The Industry Speaks: Labor Availability and the RTP Market**

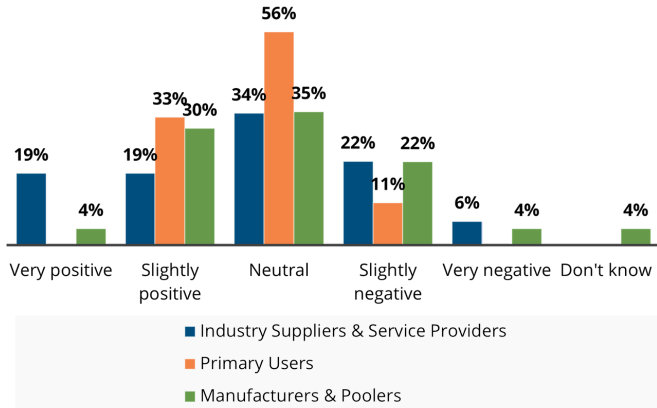
In 2020, just over half of all survey respondents said they expected labor availability (or lack thereof) to increase demand for reusables over the next five years. This sentiment has not changed significantly in the past three years based on our 2023 survey (see Fig. 25).

While one third of Primary User respondents said that this factor had increased their company’s use of RTP in the past three years, over half said it hadn’t impacted their use at all (see Fig. 26). The same share of RTP Manufacturers and Poolers agreed labor availability had increased demand for their products over the past three years, 35% felt no impact, and 26% felt labor availability had actually decreased demand.

**Figure 25: Expected Impact of Labor Availability on Demand for RTP, 2023 - 2028**



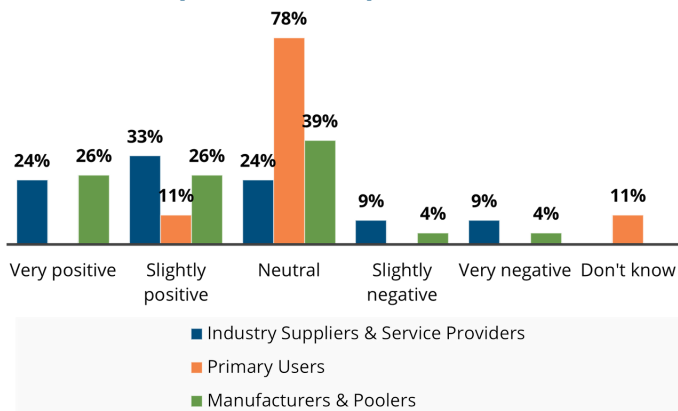
**Figure 26: Impact of Labor Availability on Demand for RTP by Respondent Group, 2020 - 2023**



Looking ahead, a resounding 78% of Primary User respondents said labor availability wouldn't impact their companies' use of RTP over the next five years, with only 11% saying it would increase their use (see Fig. 26).

RTP Manufacturers and Poolers were more bullish, with over half of this group saying labor availability would have a positive impact on their business in the coming 5 years, 39% felt it would have no impact, and 8% felt it would negatively impact their business.

**Figure 27: Expected Impact of Labor Availability on Demand for RTP by Respondent Group, 2023 - 2028**



## Raw Material Availability

Reusable packaging is created using a variety of materials, including renewable resources, in the case of cellulose-based products, and highly recyclable non-renewable materials in the case of plastic, metal, and glass. As the global population grows and aspires to a higher standard of living, the strain on the earth's ability to meet the need for nonrenewable resources is increasing, requiring an urgent switch to a circular approach to raw material management. The cardboard used to create much of the single-use transport packaging consumed globally has experienced volatility during the past few years, from [supply issues](#) to [falling demand](#).



As we shift our emphasis from the linear “take, make, and trash” supply chain to a circular model that conserves resources, reusable packaging can play a crucial role. Because reusables are built to last, they consume fewer raw materials on a per-use basis than disposable packaging over their long service life. When it eventually becomes uneconomical to repair, much reusable packaging can be recycled. In fact, most reusable packaging vendors have recycling programs in place whereby they will take back damaged packaging or at least connect the customer with a regional recycling partner.

### Avoiding material price volatility

Another benefit of reusable packaging is less exposure to price volatility. Because reusables last such a long time, there is less urgency to buy replacements during periods of extremely high prices. When the cost of lumber rose dramatically in 2021, wood pallet prices also shot through the roof. Companies with reusable pallet programs were in a much better position to avoid significant purchases during the event, whereas shippers using one-way shipping pallets had no choice but to buy high. As shown Fig. 28 and 29, both wood pallet and thermoplastic resin prices rose rapidly during that time, leaving expendable packaging providers exposed to painful price increases.

### Recycled content usage and utilizing ocean-bound plastics

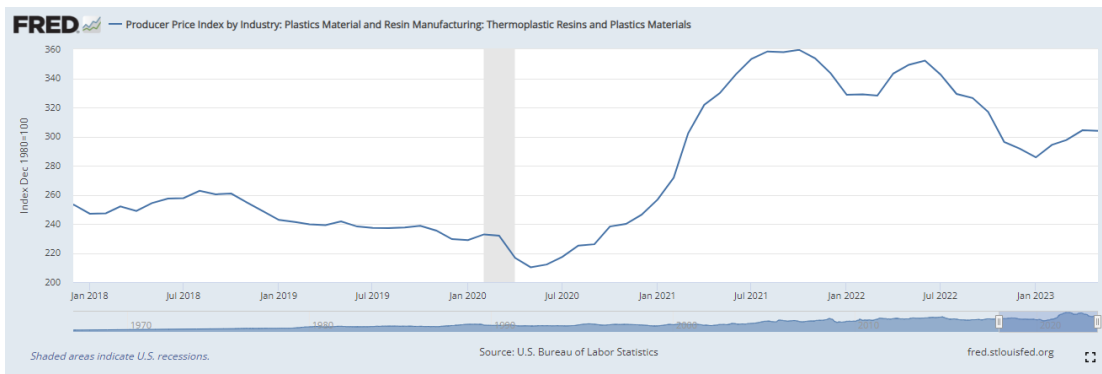
Aside from minimizing new raw material usage and enjoying high recycling rates, reusable packaging production can also utilize a great deal of recycled content. Many plastic containers and pallets contain some recycled content, ranging up to 100%. High percentages of recycled materials are common in pallets and thick-walled containers.

While some plastics are easily recycled into new reusable packaging products, others are more challenging, such as mixed post-consumer content. Increasingly, reusable packaging suppliers are becoming increasingly adept at utilizing such material in their reusable products.

**Figure 28: Producer Price Index, Wood Pallets and Pallet Containers, 2018 - 2023**



**Figure 29: Producer Price Index, Wood Pallets and Pallet Containers, 2018 - 2023**



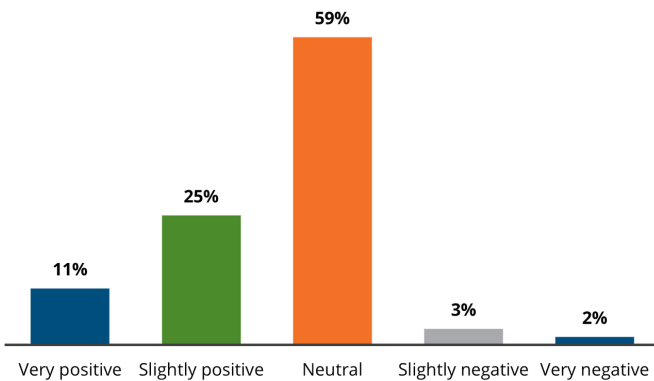
Our expert interviews show that large corporations are looking to reduce the use of virgin materials. We heard that companies are asking themselves, “...how do we reduce source material and then how do we reuse it more?” and “I'd really hope for the near elimination of virgin material...let's just repurpose and reuse what we have today.”

**59% of survey respondents say raw material availability won't impact demand for RTP.**

### The Industry Speaks: Raw Material Availability and the RTP Market

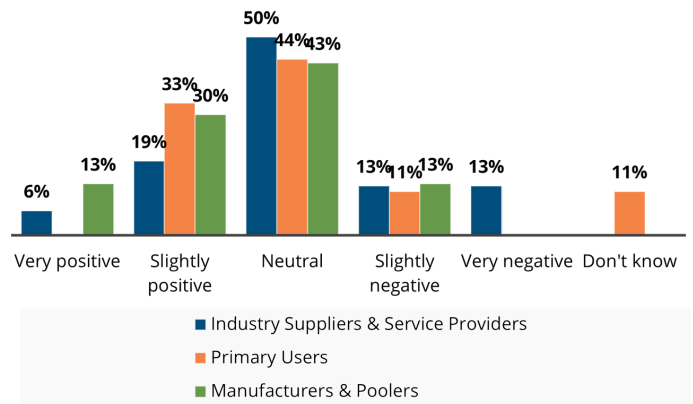
In 2020, 54% of survey respondents said raw material availability will have no impact on demand for reusables over the next five years. The results of our 2023 survey confirm this expectation, as 59% still agree with this sentiment (see Fig. 30).

**Figure 30: Expected Impact of Raw Material Availability on Demand for RTP, 2023 - 2028**



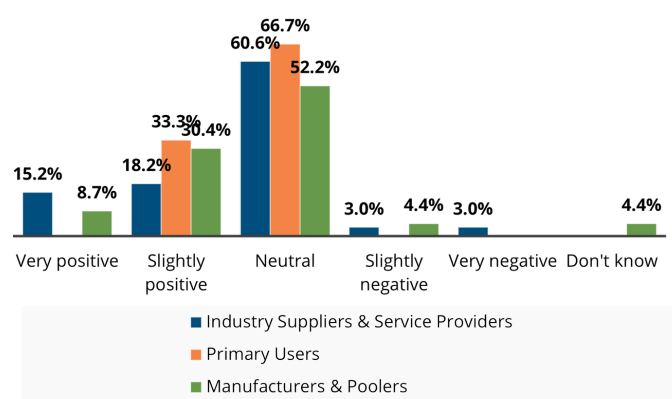
43 and 44% of RTP Manufacturers and Poolers and Primary Users, respectively, said raw material availability hadn't impacted use of RTP over the past three years, and the remaining responses were mixed (see Fig. 31).

**Figure 31: Impact of Raw Material Availability on Demand for RTP by Respondent Group, 2020 - 2023**



Looking ahead, most (67%) of Primary Users are neutral about the impact of raw material availability on RTP for the next five years, with the remaining 33% having a slightly positive outlook. A little over half (52%) of Manufacturers and Poolers have a neutral outlook, with 30% feeling. The majority (61%) of Industry Service providers share a neutral outlook.

**Figure 32: Expected Impact of Raw Material Availability on Demand for RTP by Respondent Group, 2023 - 2028**



## Transportation Limitations and/or Costs

Transportation is a significant supply chain cost with a major impact on a company's environmental footprint. Trucking, the largest component of U.S. logistics spending, rose 23.4% in 2021 to \$831 billion in 2021 according to [CSCMP](#). No surprise, freight also has a large sustainability footprint. In 2020, a quarter of all US transportation sector greenhouse gas emissions were generated by [medium- and heavy-duty trucks](#).



RTP can help by driving transport efficiency in several ways. RTP can help increase the value density of a freight load through design that allows for higher stacking or improved part/product density within the conveyance. Also, extremely stable unit loads consisting of reusables can be unloaded and loaded quickly, helping to reduce time at the dock. Additionally, RTP can help to maintain product quality, resulting in fewer delays or replacement shipments resulting from product damage. Finally, through IoT enabled reusables, information on product condition or events can enable tactical in-transit decisions as well as the collection of cumulative data to help supply chain participants better optimize their supply chains.



### Improved load value density

It goes without saying that supply chains can reduce transportation cost on a per-item basis if more products can be loaded on a trailer or into an ocean container. Reusables help improve the value density of loads in several ways. In the case of crushable products such as fresh produce or case-ready meat, for example, the superior strength of RPCs allows for unit loads to be stacked higher than would be possible with disposable packaging. In applications such as durable goods manufacturing, RTP designers excel at creative solutions that regularly enable improved part density in a container. Designers also address the value density challenge through designing containers that best fit the conveyance, such as reusable bulk containers designed to optimize the utilization of ocean containers.

### Enhanced loading and unloading

Because reusable handheld and bulk containers both create extremely stable unit loads, they can be quickly loaded and unloaded from trailers, while standard containers can help streamline the receiving verification process. Both of these benefits help expedite a quicker turnaround of transport vehicles at the dock.



### Avoiding load damage claims and expedited replacement shipments

Reusables help to improve product protection and are associated with less product damage than disposable packaging. Regarding transport, the reduced occurrence of product damage translates into fewer time-consuming delays during the receiving process, potential part shortages, and also the cost of expedited shipments that may be needed to replace damaged parts.

### IoT enabled sensors can help optimize transport

As IoT enabled sensors in reusable packaging continue to gain acceptance, they promise to help promote further transportation efficiencies. For example, the enhanced accuracy of shipping and receiving information can help improve operational efficiency and accuracy. IoT enabled sensors can aid in identifying in real-time the occurrence of distressed merchandise at a granular level to enable a timely response, and through data analytics to identify bottlenecks or other inefficiencies.

In our expert primary user interviews, the relationship between RTP and transportation costs was viewed as ripe with opportunity. One expert noted that as more companies adopt reusables, the efficiencies that come with standardization will extend to transportation:

*I think there's a transportation cost benefit long term as well because of whatever your transport's going to be, once you get the number of turns and reuse, and I believe there will be benefits on efficiencies when you have standard transportation.*

Another expert thought transportation and freight companies themselves would help push adoption of RTP in order to become more efficient: "...long distance transportation companies, they'll be seeking better efficiencies on their fuel and moving forward as well."

**55% of survey respondents say transportation will have a positive impact on RTP demand.**

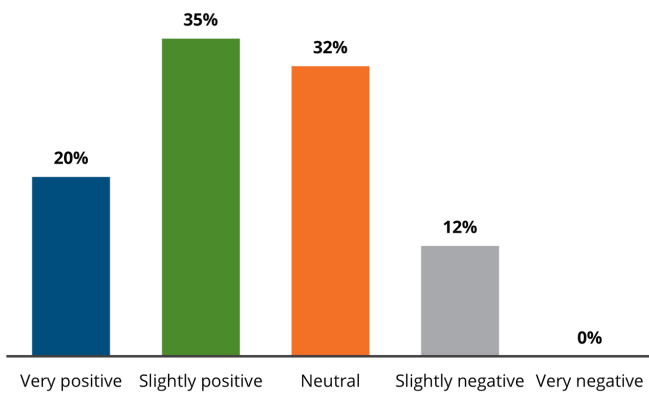
### The Industry Speaks: Transportation and the RTP Market

In 2020, about half (49%) of survey respondents said transportation-related factors would have a positive impact on demand for reusables over the next five years. In our 2023 survey, 55% of respondents agree with this sentiment (see Fig. 33). The results of our 2023 survey show a large portion across all groups feel transportation has had a neutral to positive impact on RTP use over the past three years (see Fig. 34).

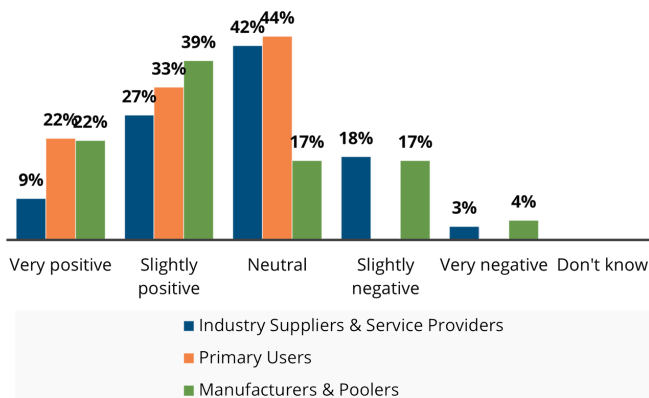


There is a minority across Industry Suppliers & Service Providers and Manufacturers & Poolers that feel transportation has had a negative impact. Notably, none of the primary users had a negative perception of the impact of transportation on RTP use.

**Figure 33: Expected Impact of Transportation on Demand for RTP, 2023 - 2028**



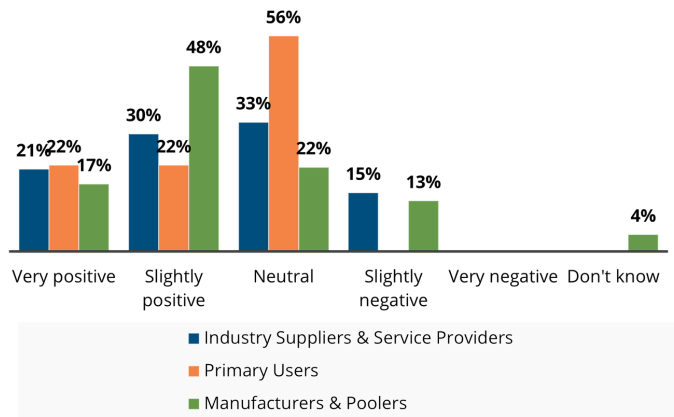
**Figure 34: Impact of Transportation on Demand for RTP by Respondent Group, 2020 - 2023**



Looking forward to the next five years, respondents' overall outlook for the impact of transportation on RTP use is neutral to positive, with minimal anticipation of negative impact.

56% of Primary Users don't expect transportation to have an impact, while the other 44% expect a positive impact on RTP use (see Fig. 35). Manufacturers & Poolers are the most optimistic group, with 65% predicting a positive impact. 22% feel there will be no impact, and a small number predict a slightly negative impact (13%).

**Figure 35: Expected Impact of Transportation on Demand for RTP by Respondent Group, 2023 - 2028**

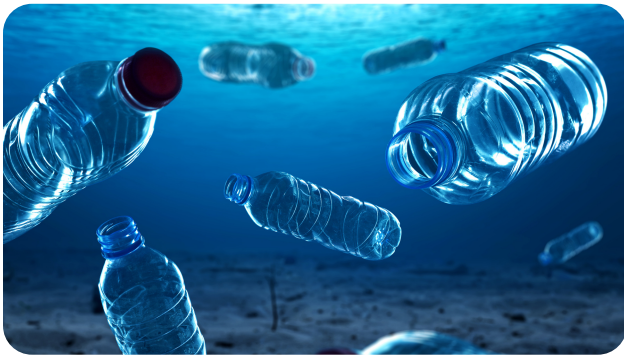


## Consumer Preferences

Consumer demand can help drive demand for reusable packaging, though most directly for reusable consumer packaging. Reusable packaging offers hope in the fight against environmental issues directly related to disposable packaging such as ocean plastic. In fact, public concern about ocean plastic has become the top public sustainability concern, according to a 2023 [McKinsey survey](#).

Similar results about ocean plastic were reflected in a [2022 survey](#) undertaken by WWF in association with Corona Insights. Results showed that 85% of people were very frustrated or moderately frustrated that

plastic waste generated in the United States ends up in oceans. 86% of survey participants indicated they were most concerned about the impact of plastic waste on marine life, while 76% were concerned about the impact of plastic pollution on water quality. Recycling simply has not worked to this point in time as results continue to be highly disappointing. Consider that only [5-6% of U.S. municipal plastic waste was recycled in 2021](#).



In response to such environmental challenges, consumer interest in supporting reusable packaging has grown in recent years. This trend was reflected in a [2022 survey by Trivium Packaging](#). Based on a sample of 15,000 consumers across Europe, North America, and South America, 74% of respondents expressed interest in buying products in refillable packaging. Major brands have followed this shift, resulting in reusable packaging usage goals being announced by major companies such as [Coca-Cola](#) and [Pepsico](#).

While consumer preferences can highly influence the availability of reusable consumer packaging, the role of those preferences in shaping reusable transport packaging decisions is often more of a secondary nature.

Public concern about environmental degradation can spark concerns about corporate sustainability performance, which in turn can drive supply chain decision makers to look at reusable transport packaging as one effectively spoke in a company's sustainability plan.

In our primary user interviews, we heard about various ways consumers are indirectly driving the adoption of RTP:

*"...the story of [a] product is generally being put out to consumers...the journey of that product from farm to table...and also the transportation requirements for it to be available as well. So nothing specific [such as] 'I want to know what that pallet is made of', but it's the entire cycle that consumers are looking at. And this puts into play the opportunity to increase secondary packaging, reusable packaging in transportation."*

*"I believe there's sufficient momentum currently that will continue...primarily [from] the consumer behavior or the consumer conscience. These eco-conscious consumers will be pushing retailers, retailers will be pushing suppliers."*

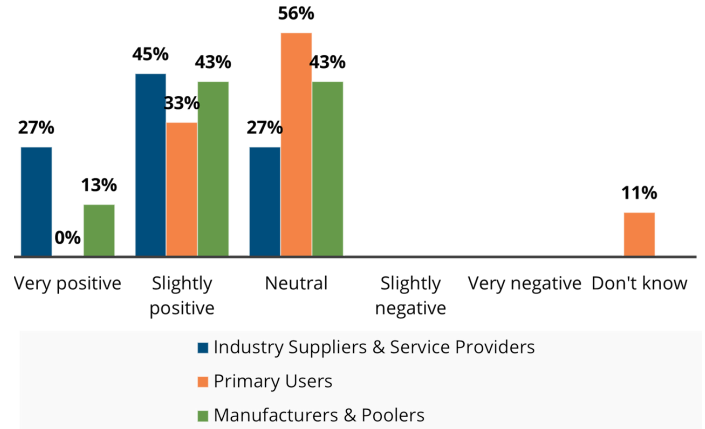
**"I think there's a consumer behavioral trend where people are ...expecting purchases to come with some level of thought of the environment...so, you're reducing the amount of cardboard you're using."**  
- Primary User Interviewee

**75% of survey respondents say consumer preferences will have a positive impact on RTP demand.**

**The Industry Speaks: Consumer Preferences and the RTP Market**

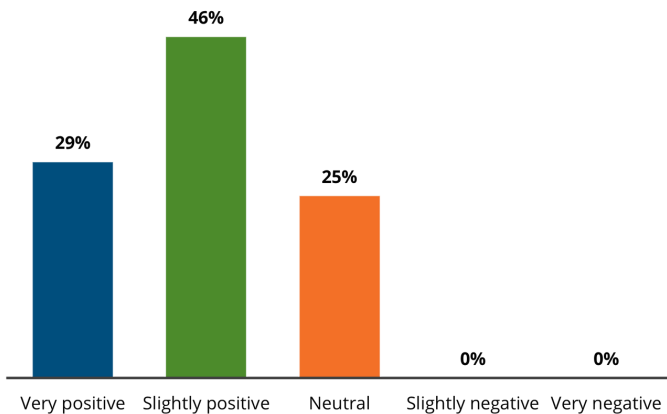
The results of our 2023 survey show, across all groups, the perception of the impact of consumer preferences on RTP demand in the past three years has been largely neutral to positive, with no negative views (see Fig. 37). One third of Primary Users felt consumer preferences had increased their company’s use of RTP over the past three years, while the majority (56%) said there had not been an impact, and none viewed the impact as negative.

**Figure 37: Impact of Consumer Preferences on Demand for RTP by Respondent Group, 2020 - 2023**



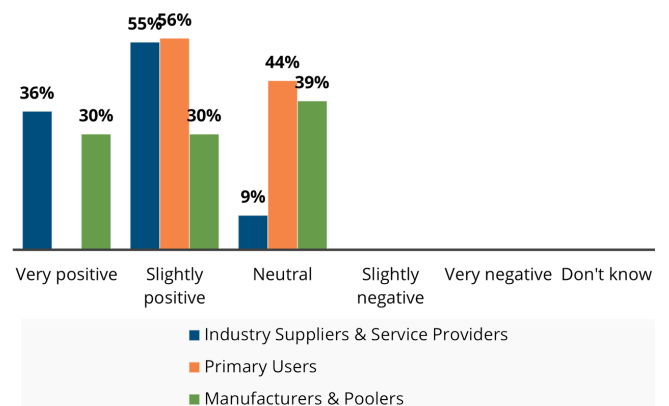
56% of RTP Manufacturers & Poolers said consumer preferences had increased the use of their products over the past three years, and the remainder said the impact had been neutral.

**Figure 36: Expected Impact of Consumer Preferences on Demand for RTP, 2023 - 2028**



For the next five years, the overall outlook for the impact of consumer preferences on RTP use is positive, with no anticipation of negative impact. 56% of Primary Users expect consumer preferences to increase their use of RTP; 44% expect no impact. 60% of Manufacturers and Poolers felt the impact would be positive, 39% feel there will be no impact.

**Figure 38: Expected Impact of Consumer Preferences on Demand for RTP by Respondent Group, 2023 - 2028**



# 2023 Survey Results and Analysis

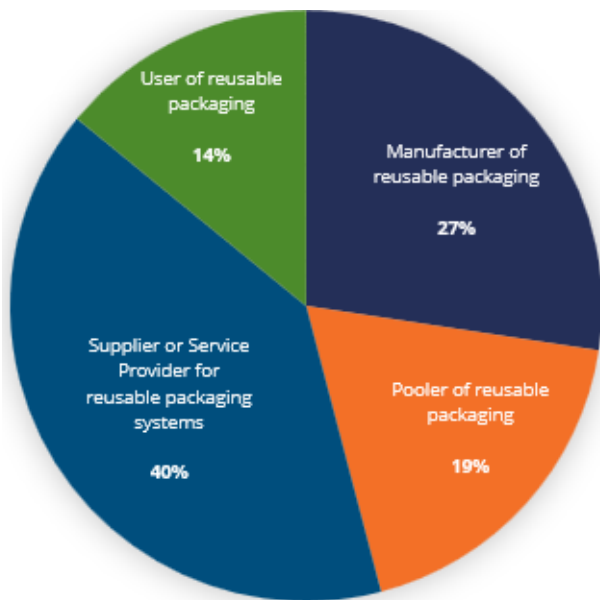
The 2023 State of the Reusable Packaging Industry Survey was an online survey conducted between April 24 and May 26, 2023 by the Reusable Packaging Association. The survey's intent was to gather insights into recent reusable transport packaging industry performance as well as expert predictions for the future growth of the industry and the trends and market forces that will shape this growth.

Survey respondents included Manufacturers and Poolers of reusable transport packaging products,

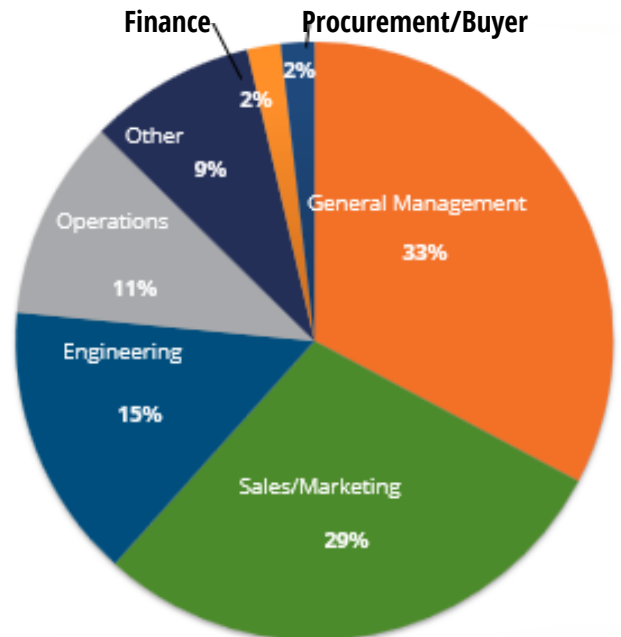
Primary Users of these products, and Service Providers to the reusable transport packaging industry (see Fig. 39). The following sections will explore the responses of each group in greater depth.

Within their organizations, one-third of respondents were in General Management, 30% in the Sales or Marketing function, 15% in Engineering, and approximately 10% each were in Operations or Other job functions. The remainder were in Finance and Procurement functions (see Fig. 40).

**Figure 39: 2023 Survey Respondents by Company Role in the RTP Industry**

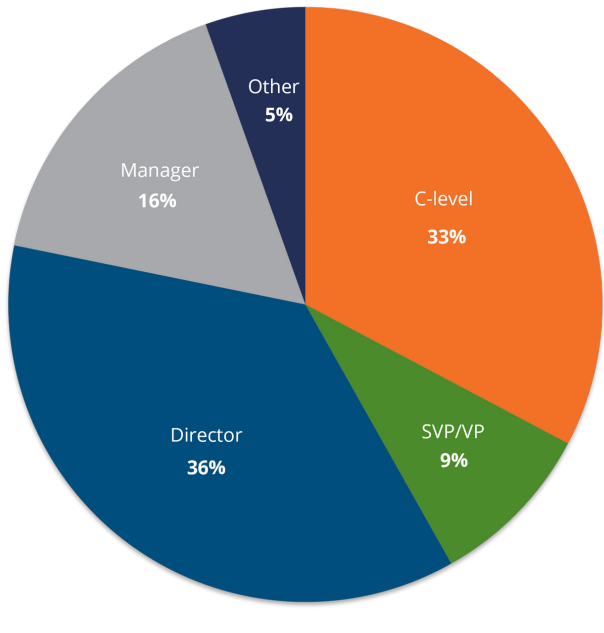


**Figure 40: 2023 Survey Respondents by Job Function**



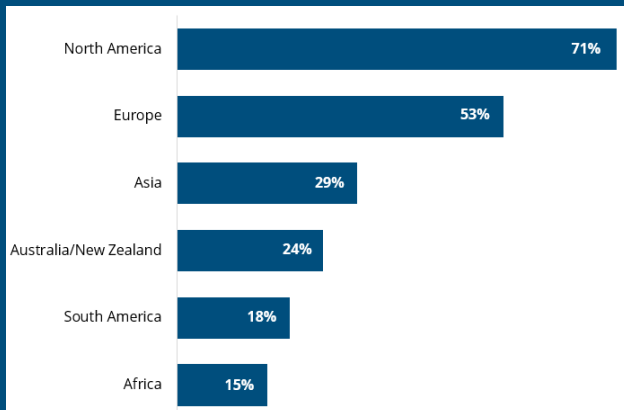
Director-level respondents comprised 36%, C-level 33%, Manager 16%, SVP/VP 9%, and the remainder Other (see Fig. 41).

**Figure 41: 2023 Survey Respondents by Job Title**



Respondents' companies operate globally, with 71% operating in North America, 53% in Europe, 29% in Asia, 24% in Australia/New Zealand, 18% in South America, and 15% in Africa (see Fig. 42).

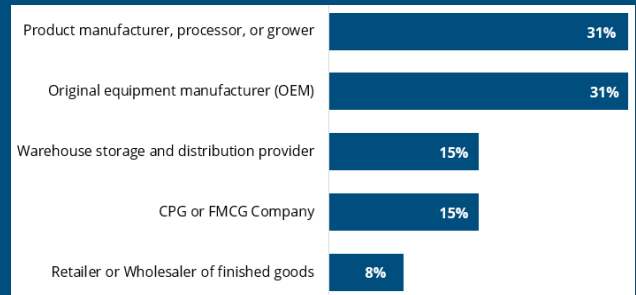
**Figure 42: 2023 Survey Respondents' Regions of Operation**



## Primary User Responses

Primary User respondents came from a variety of industries (see Fig. 23). Original Equipment Manufacturers (OEMs) and Product Manufacturers, Processors, or Growers each made up 31% of respondents. CPG or FMCG companies and Warehouse Storage and Distribution Providers each made up 15%, and the remaining 8% of respondents were Retailers or Wholesalers.

**Figure 43: 2023 Primary User Survey Respondents by Industry**



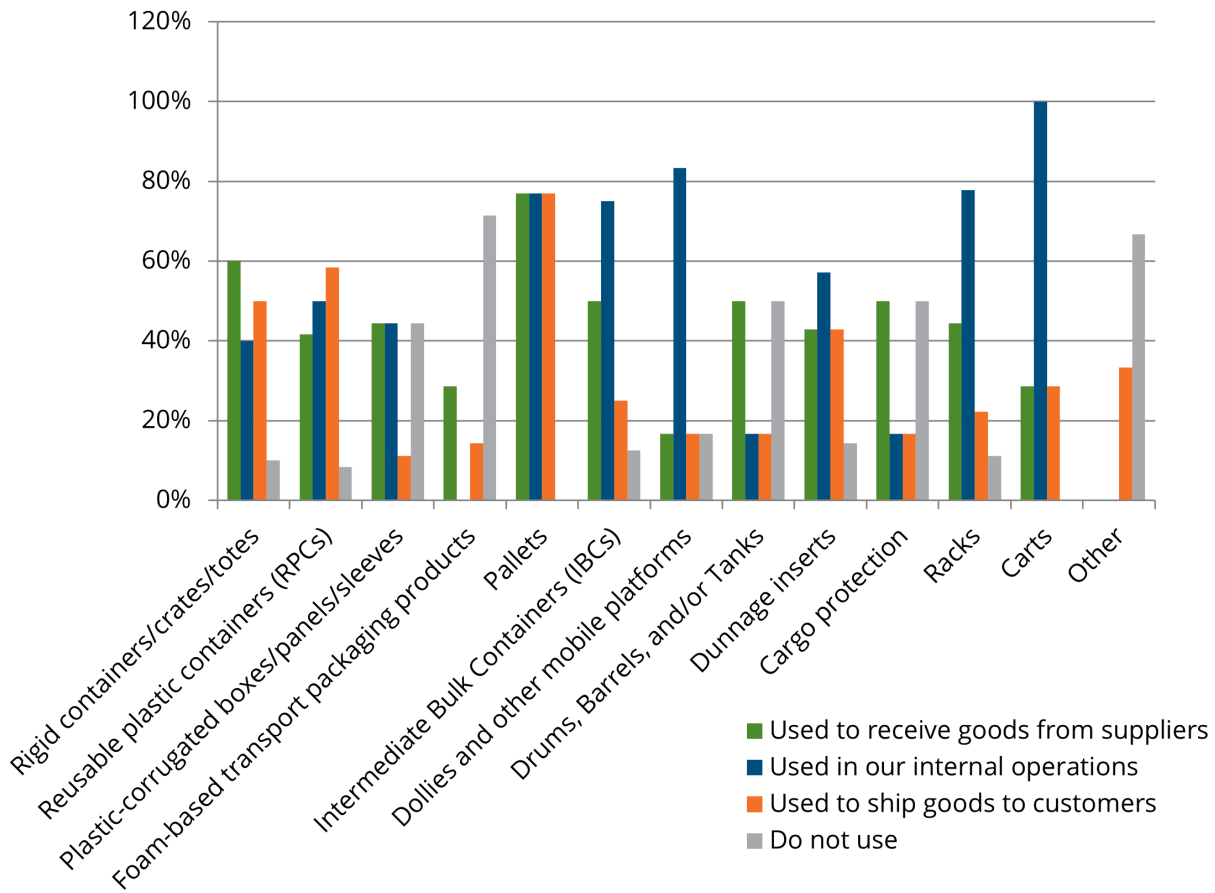
## How Primary Users Utilize RTP

Primary Users were asked how their company uses various types of RTP, whether to receive goods from suppliers, in internal operations, or to ship goods to customers (see Fig. 44).

*Rigid containers, crates, and totes* are used across the supply chain, with 60% reporting using them to receive goods from suppliers, 50% to ship goods to customers, and 40% for internal operations.



**Figure 44: Primary Users' Companies' Use of RTP Across the Supply Chain, by RTP Type**



RPCs are used fairly consistently across the supply chain, with the highest use in shipping goods to customers (58%) and least in receiving goods from suppliers (42%).

Plastic-corrugated boxes, panels, and sleeves are used mainly to receive goods and internal operations, both 44%. Another 44% do not use them at all.

Foam-based transport packaging products are not used by 71% of respondents, though 29% use them to receive goods and 14% to ship goods.



Photo courtesy [Hiperpack](#)

Pallets are used heavily, and evenly, across the supply chain. Not surprisingly, all Primary Users reported using them (both at 17%).



*Dollies and other mobile platforms* are heavily used in internal operations (83%) and minimally in receiving goods from suppliers and shipping goods to customers

*IBCs* are primarily used in internal operations (75%) and only 25% use them to ship goods to customers.



Courtesy of [Monoflo International](#)

*Drums, Barrels, and/or Tanks* are evenly used in receiving goods from suppliers and shipping goods to customers (both at 50%) and less internally (17%).

*Dunnage inserts* are used fairly evenly across the supply chain, with 57% in internal operations and 43% each in receiving goods from suppliers and shipping goods to customers.

*Cargo protection* is used by 50% of Primary Users both to receive goods from suppliers and ship goods to customers. 17% use it in internal operations.

*Racks* are used by 78% of Primary Users in internal operations; 22% in shipping goods to customers.

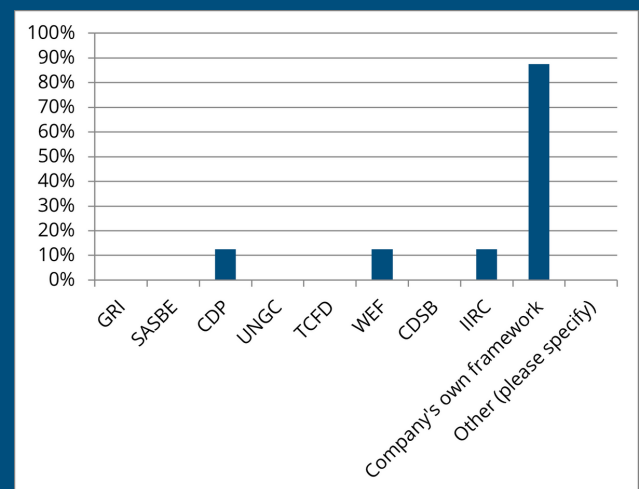
*Carts* are used primarily in internal operations (100%); 29% use them to receive and ship goods.



### Primary Users' Sustainability Programs

100% of Primary User respondents reported that their companies had a formal sustainability program, initiative, or charter. They were then asked to which ESG reporting framework their company reported (see Fig. 45). 88% of respondents reported using their company's own framework, and the remainder use the [World Economic Forum \(WEF\) metrics](#), the [International Integrated Reporting Council's \(IIRC\) framework](#), or the [CDP framework](#).

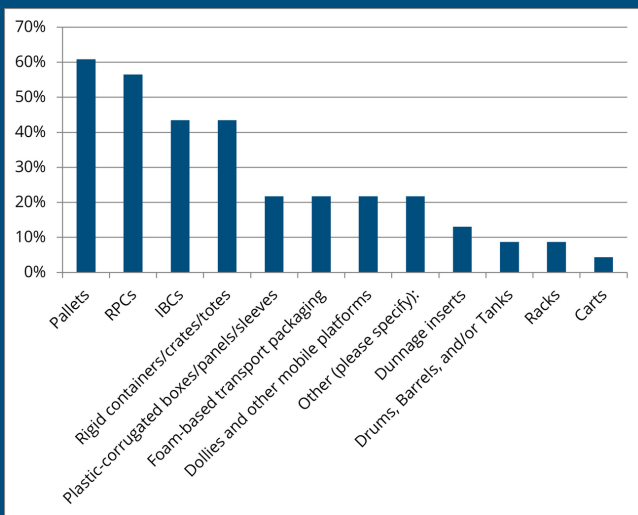
**Figure 45: Primary User ESG Frameworks**



## Manufacturer & Pooler Responses

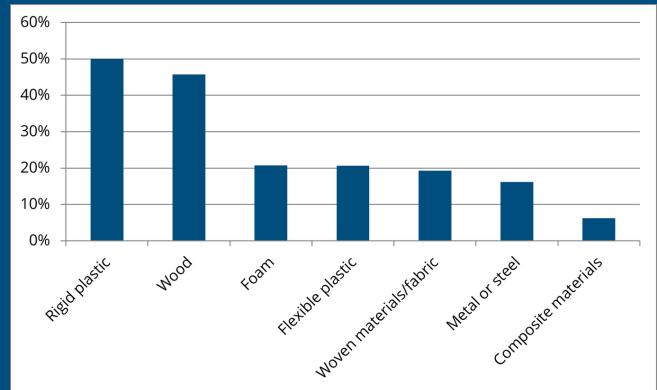
Manufacturer and Pooler respondents represented a broad array of reusable packaging (see Fig. 46). Approximately 60% of respondents in this category sell or rent pallets or RPCs (61% and 57%, respectively); 43% sell or rent IBCs and/or rigid containers, crates, or totes; 22% sell or rent plastic-corrugated boxes, panels, or sleeves, foam-based packaging, or dollies/mobile platforms; 15% sell or rent dunnage inserts; 9% each sell or rent drums, barrels, and/or tanks or racks; 4% sell or rent carts. No respondents sell or rent cargo protection.

**Figure 46: Types of RTP Sold or Rented by Manufacturer or Pooler Respondents**



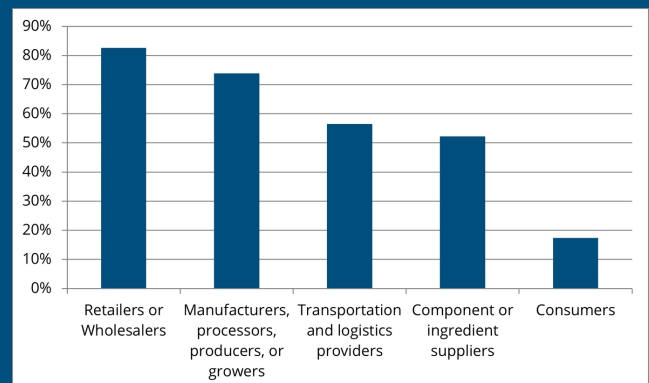
Respondents' businesses utilize a variety of materials for their RTP (see Fig. 47). An average of 50% of respondents' products are from rigid plastic, 46% from wood, 21% from either foam or flexible plastic, 19% from woven materials, 16% from metal or steel, and 6% from composite materials.

**Figure 47: Average Percentages of Manufacturer or Pooler Respondents' Products Made from Various Materials**



Manufacturer and Pooler respondents' RTP products are used across the value chain (see Fig. 48). 83% of these respondents said their products are used by retailers or wholesalers; 74% are used by manufacturers, processors, producers, or growers; 57% are used by transportation and logistics providers; 52% are used by component or ingredient suppliers; and 17% are used by consumers.

**Figure 48: Use of RTP Manufacturer or Pooler Respondents' in the Value Chain**





# Biggest Issues Facing Manufacturers + Poolers

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In our 2023 survey, we asked respondents for their opinion on the biggest challenge facing their business. The responses from Manufacturers and Poolers fell into three major categories, outlined below.



## Economic Pressure

Respondents repeatedly cited a rising Cost of Goods Sold (COGS) as a result of increasing transportation and logistics rates, labor scarcity, rising energy, raw material and insurance costs, and general inflation, coupled with a limited ability to pass these cost increases on to customers. In addition, the economic uncertainty in the current environment is leading to lower CapEx availability and investment capital in general.



## Commercial Acceptance of Reusable Models

RTP Manufacturers and Poolers also noted difficulties overcoming single-use mindsets with prospective customers and the time it takes for circular concepts to gain acceptance within organizations as a result of years of "take-make-waste" cycles. In particular, the purchasing mindset of OpEx vs. CapEx was noted as a common hurdle.



## An Ambiguous Regulatory Landscape

Respondents noted that conflicting, unclear, and aggressive environmental regulations create confusion among Primary Users looking to comply. In addition, the continued emphasis on recycling over reuse models by regulatory bodies is slowing adoption of circular systems.

# Acknowledgements

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RPA would like to thank the following for their invaluable contributions to this report:

## 10EQS

10EQS is a leading consulting network providing on-demand strategy consulting services and expert insights to clients, which include Fortune 500 companies, investment, and leading professional services firms, as well as SMEs and start-ups across various industries to support their corporate strategy initiatives. The company works with a qualified network of leading consultants, industry experts, and analysts across the globe.

## Rick Leblanc, Reusable Packaging News

Rick has been writing about pallets and reusable packaging applications since 1995 in publications such as Pallet Enterprise Magazine and Western Pallet Magazine. He launched [ReusablePackaging.net](https://www.reusablepackaging.net) in 2009 to better serve logistics practitioners looking for advice about pallets and reusables, as well as in delivering the most comprehensive news available about this market.

# References

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1. 10EQS. *Global Reusable Packaging Market Size Report*. Unpublished document; 2023.
2. Allied Market Research. (2017). *Packaging and Protective Packaging Market by Material (Paper & Paperboard, Rigid Plastics, Flexible, Metal, Glass, and Others), Function (Cushioning, Blocking & Bracing, Void-fill, Insulation, Wrapping, and Others), and Application (Food, Beverage, Healthcare, Cosmetics, Industrial, and Other Consumer Goods): Global Opportunity Analysis and Industry Forecast, 2017-2023*; Retrieved from <https://www.alliedmarketresearch.com/packaging-and-protective-packaging-market>.
3. Reusable Packaging Association. (2020). *State of the Reusable Packaging Industry Report*.

## About RPA

Founded in 1999, the Reusable Packaging Association (RPA) is a non-profit trade organization representing and promoting the common and pro-competitive business interests of member suppliers and users of reusable packaging products and services. RPA connects the industry to expand, innovate and validate reusable packaging systems.

## Contact

### Reusable Packaging Association

1700 12th Street Northwest  
Suite 700  
Washington, DC 20005

[info@reusables.org](mailto:info@reusables.org)

[www.reusables.org](http://www.reusables.org)

