

CARREFOUR

THE CIRCULAR ECONOMY

<u>Version :</u>	May 2025
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1. Introduction to Carrefour's challenges

1.1 Context and challenges

Carrefour's business generates waste in its shops, logistics centres and throughout its supply chain. The way in which this waste is handled varies according to the regulations and purchasing habits of the countries in which it is produced. Depending on how it is managed, this waste can generate pollution and a scarcity of resources. It can also damage a company's image and generate additional costs. Waste from single-use plastic packaging is a priority issue for the Group. The mass retail sector has a role to play in innovating, changing practices and meeting consumer demands. While plastic pollution is a matter of concern for many consumers, changes in practices still need to be supported and facilitated. The policy, objectives and action plan relating to packaging can be found in section 2. Develop the circular economy within the range of products and services.

Similarly, food waste is an issue that concerns the entire chain, from the production stages, warehouses and shops right through to the consumer. It contributes to the scarcity of resources. There are many reasons for this waste: overproduction, grading criteria, breaks in the cold chain, poor stock management, mismatches between order and demand, consumer habits, etc. Solutions exist at every stage of the value chain. Policies, objectives and action plans relating to the management of waste and food waste can be found in section 3. Developing the circular economy within operations.

1.2 Impacts, risks and opportunities

Table 1: List of material impacts, risks and opportunities related to the circular economy

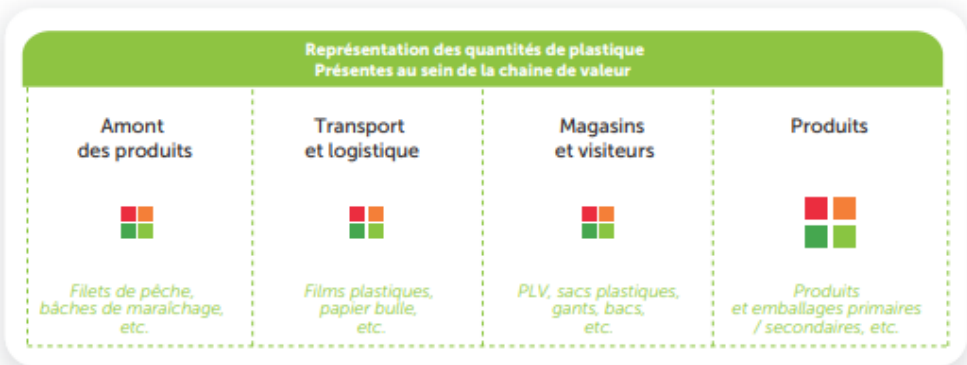
Report section	Name of IRO	Definition of IRO	Type	Value chain area	Time horizon
Develop the circular economy within the product and service offering	Pollution caused by poor upstream waste management	Inadequate waste management, whether in operations (sorting in shops), upstream (during production, processing or transport), or downstream (during disposal by consumers and communities), can lead to negative effects on the environment (soil and water contamination) and health.	Impact	Upstream Downstream Operations	Long term
Developing the circular economy within the product and service offering	Waste in the production chain and supplier logistics	Losses of raw materials and food waste can occur during production, processing and transport, or as a result of poor stock management and promotions in shops. These unnecessary losses have an environmental impact and an impact on consumers' purchasing power.	Impact	Upstream Operations Franchises Downstream	Long term
Developing the circular economy within our product and service offering Developing the circular economy within operations	Carrefour blamed for the waste in the environment	Inadequate waste management, whether it comes from factories producing products, consumers using Carrefour products, or franchise partners, can lead to local pollution. These situations expose the Group to reputational risks that could damage its brand image.	Risk	Upstream Downstream Franchises	Short term
Developing the circular economy within the product and service offering Developing the circular economy within operations	Increasing costs associated with waste management and scarcity of resources	Poor waste management in shops and warehouses can lead to higher operating costs (e.g. treatment costs) and an increase in eco-contributions, particularly in the event of non-compliance with regulations (e.g. EPR). eco-contributions, particularly in the event of non-compliance with regulations (e.g. EPR). In addition, the depletion of natural resources and increasing eco-design requirements may lead to higher	Risk	Upstream Operations	Short and long term

		supply and production costs for suppliers, with direct repercussions on Group costs.		
Developing the circular economy within the product and service offering	Depletion of resources linked to the manufacture of products and packaging sold	The production and processing of products and packaging sold requires the consumption of agricultural raw materials and natural resources (e.g. water, wood, silica). Managing the production of these raw materials can contribute to the depletion of natural resources.	Impact	Upstream Long term
Develop the circular economy within the product and service offering	Integrate the circular services and offerings	Insurance activities and the development of new offers linked to the circular economy promote more sustainable practices by reducing environmental impact. These initiatives help to optimise costs and preserve natural resources.	Opportunity Impact impact	Downstream Short term
Develop the circular economy within the product and service offering	Economic and reputational challenges associated with integrating the circular economy	Developing service offerings around circularity and reparability requires significant investment to demonstrate long-term profitability, which can represent a significant cost for the Group. In addition, a negative consumer perception of a lack of commitment to the circular economy (e.g. excessive use of packaging) could harm the Group's appeal and weaken its brand image.	Risk	Upstream Downstream Short and medium term

In 2022, Carrefour carried out a macro-analysis of the impacts relating to plastics, arising from its activity and the activity of its partners at key stages in the supply chain, taking into account the processing capacities of the Group's integrated countries. The main plastic risks are identified at the various stages in the life cycle of the products presented in the first part of the study. It is on the basis of this macro-analysis that the Group has chosen to prioritise the reduction of plastic packaging as a key focus of its circular economy policy.

Figure 1: macro-analysis of impacts relating to plastics

Chaîne
de valeur
de Carrefour



Fabrication du plastique

On peut estimer que 90% du plastique fabriqué puis utilisé pour l'activité du Groupe sont liés aux produits vendus, et 80% de ce plastique proviennent des emballages.

Impacts principaux liés à la fabrication du plastique : pollution des sols et des eaux lors de l'extraction du pétrole ; consommation d'énergie et émissions de GES lors de sa transformation en plastique ainsi qu'émissions polluantes dans l'air.



Fin de vie du plastique

Nous étudions ici les capacités de traitement et de recyclage des pays dans lesquels le Groupe opère au regard des quantités mobilisés dans chaque pays. Nous estimons globalement que le plastique fabriqué et utilisé dans l'ensemble de la chaîne de valeur est recyclé pour 20%, incinéré pour 38%, mis en décharge pour 56% ou diffus pour 6%. En effet, le taux de recyclage du plastique peut fortement varier localement, en particulier le plastique non issu de déchets ménagers : 1% au Brésil, 26% en France et 47% en Espagne. Ces 3 pays sont prioritaires pour le Groupe avec plus des 3/4 des volumes de plastiques produits.

Impacts principaux liés à la fin de vie des plastiques : pollution de l'air et émissions de GES lors de l'incinération du plastique en fin de vie, ou pollution des sols et des eaux en cas d'enfouissement ou de rejet dans la nature.



Microplastiques relargués

Des microplastiques peuvent être relargués à différentes étapes de la chaîne de valeur. Ils peuvent être relargués dans l'air, par l'usage de véhicule pour le transport de marchandises ou le déplacement des visiteurs. Ils peuvent également être relargués dans l'eau, par exemple par le lavage de vêtements.

Impacts principaux liés au relargage des microplastiques : pollution de l'air, des sols et des eaux.



Migration des substances toxiques

L'interaction prolongée du plastique avec des produits alimentaires liquides ou humides peut donner lieu à la migration de substances sensibles dans les aliments, notamment en lien avec la présence d'additifs. De rares produits non alimentaires peuvent présenter ce même risque de transfert.

Impacts principaux liés à la migration de substances toxiques : santé humaine par la migration de substances toxiques des plastiques d'emballage vers l'alimentation.

1.3. Stakeholders, standards and regulations

Type of stakeholder	Role	Type of dialogue	Example of stakeholders	Sections concerned
Suppliers	Deployment of projects in the field	Working groups	Food Transition Pact	Developing the circular economy within the product and service offering Developing the circular economy within operations
Suppliers	Deployment of projects in the field	Regular one-to-one dialogue	Suppliers of food products (R&D to extend use-by dates)	Developing the circular economy within the product and service offering Developing the circular economy within operations
Suppliers	Deployment of projects in the field	Regular one-to-one dialogue	Packaging suppliers	Develop the circular economy within the product and service offering
Suppliers	Deployment of field projects	Partnerships	Solution providers: Too Good To Go, Terracycle, Loop, Nous anti gaspi, Phenix, Hop Hop food	Developing the circular economy within the product and service offering
Associations and NGOs	Deployment of projects in the field	Partnerships	Restos du Coeur	Developing the circular economy within operations
Associations and NGOs	Definition of Group targets	Stakeholder panels	Surfrider Foundation Europe, Zero Waste France, Tara Oceans, WWF, No plastic in my sea	Developing the circular economy within the product and service offering Developing the circular economy within operations

Sector organisations	Definition of sectoral / national strategies	Consultations and ad hoc consultations	Federation of Commerce and Distribution	Developing the circular economy within product and service offerings Developing the circular economy within operations
Customers	Deployment of projects in the field	Mutual information	Consumers encouraged to take their reusable containers back to the shop, Club Consommateurs Engagés	Developing the circular economy within the product and service offering Developing the circular economy within operations
Multi-stakeholder initiatives	Definition of Group targets	Consultations and ad hoc consultations	Ellen McArthur Foundation (Global Commitment, New Plastics Economy)	Developing the circular economy within the product and service offering
Multi-stakeholder initiatives	Deployment of projects in the field	Working groups	En avant Vrac	Developing the circular economy within the product and service offering
Business coalitions	Definition of Group targets	Working group	National Pact on Plastic Packaging	Developing the circular economy within the product and service offering
Business coalitions	Definition of sectoral / national strategies	Consultations and ad hoc consultations	Bulk and reuse network	Developing the circular economy within the product and service offering Developing the circular economy within operations
Multi-stakeholder initiatives	Deployment of field projects	Working groups	BeMed College of Companies	Developing the circular economy within the product and service offering Developing the circular economy within operations

Sector organisations	Definition of methodologies and reference frameworks	Working groups	Coalition of Action on Plastic Waste (Consumer Goods Forum)	Developing the circular economy in products and services
Scientific experts and consultants	Collaboration and involvement in the Group's transition	Consultations and ad hoc consultations	(RE)SET, ICare, ConsultantSeas, InOff Plastic, Arnaud Le Berrigaud, etc.	Developing the circular economy within our product and service offering

Standards and regulations:

The Carrefour Group follows various standards, coalitions and partnerships relating to the fight against food waste as detailed below:

- Consumer Goods Forum
- Too Good To Go Pact, which brings together manufacturers, distributors, associations, trade federations and digital players to make commitments on food waste.
- Eco Slow Wasting (Monaco's counterpart to Too Good To Go)
- FWLP

Waste and plastics:

- Hierarchy of waste treatment methods
- *The Global Commitment* of the Ellen MacArthur Foundation
- National Plastics Packaging Pact
- Recyclability standards of European eco-organisations
- *Golden Design Rules* of the Consumer Goods Forum

2. Developing the circular economy within our product and service offering

2.1. Policy and targets

Policy on the use of resources and the circular economy

Circular economy within the product offering: The Group sees the reduction of packaging, particularly plastic packaging, as a global challenge to be tackled in collaboration with its suppliers, partners and customers. The transition to plastic reduction means transforming the Carrefour Group, mainly its food systems and distribution model. The Group's CSR ambitions involve reviewing the use of packaging in its operations, reinventing the customer experience for consumers to meet these challenges.

The Carrefour Group's packaging policy is based on the four principles of "Refuse, Reduce, Reuse, Recycle". The development of eco-design is a major lever for reducing the use of plastic in packaging, in particular by developing solutions for :

- Eliminating problematic or unnecessary packaging
- Encourage the recyclability and recycling of packaging
- Increase the proportion of recycled plastic in packaging

Circular economy within the service offering: The strategy of Carma, Carrefour's insurance entity, is based on the "Reparation First" principle, which encourages the repair of equipment covered by an insurance contract or extended warranty before its renewal. These insurance products cover programmes for household equipment, in particular electrical appliances, image and sound equipment.

Targets relating to the use of resources and the circular economy

Table 2: Targets for developing the circular economy within the product and service offering

Target	Unit	Target value	Target year	Scope	Reference year
Quantity of packaging saved (cumulative) (1) (2)	T	20,000 of which 15,000 plastic	2025	Group	2017
Reusable, recyclable or compostable own-brand packaging	%	100%	2025	Group	-
Recycled plastic in packaging	%	30%	2025	Group	-
Bulk sales and deposits (3)	M €	300	2026	Group	2022

- (1) This commitment was achieved in 2023, two years ahead of schedule. Following the achievement of this commitment, new commitments concerning the use of single-use plastic packaging are being defined within the Carrefour Group.
- (2) The weight of packaging saved is calculated on the basis of the weight of plastic eliminated in the new packaging compared with the old packaging, or the difference in weight of the packaging before/after for other materials.
- (3) The target has been revised from €150m to €300m to take account of reuse sales in addition to bulk sales.

2.2 Indicators and performance

Table 3: Monitoring of key performance indicators for developing the circular economy within the product and service offering

Indicator	Unit	2023	2024	Change	Target 2024	Coverage rate	Exclusions
Organic and biobased packaging							
Total quantity of organic packaging materials	T	New	47 507	-		100 %	-
Quantity of organic packaging materials - from certified sustainable sources	T	New	16 246	-		95 %	AR
Share of certified biosourced plastic in total biosourced plastic packaging	%	New	0	-		91 %	IT & PL
Share of certified biosourced plastic in total plastic packaging	%	New	0	-		91 %	IT & PL
Share of organic packaging materials of sustainable origin in all packaging	%	New	4,6	-		95 %	AR
Recycled, recyclable and compostable packaging							
Percentage of recycled packaging materials of total packaging	%	New	15,3	-		100 %	
Percentage of recyclable packaging	%	New	55	-		100 %	
The absolute weight of or recycled components, secondary secondary intermediate products and materials used in the manufacture of the company's products and services (including packaging)	T	New	53 674	-			
Share of compostable packaging	%	New	2	-		100 %	
Total reusable packaging, recyclable and compostable packaging	T	162 940	199 890	23 %		100 %	
Total weight of wood/paper fibre packaging	T	29 784	70316	136 %	-	100%	
Share of recycling and/or certified materials in total wood/paper fibre packaging (% of	%	46,8%	18,24%	-28.6 pts	50%	-	

Indicator	Unit	2023	2024	Change	Target 2024	Coverage rate	Exclusions
total weight)							
Total weight (tonnes) of metal packaging (aluminium or steel)	T	11 153	25591	129,5 %	-	100%	
Share of recycling and/or certified materials in total metal packaging (aluminium or steel) (% of total weight)	%	28,6%	17,70%	(10.9) pts	30%	-	
Total weight of glass packaging	T	69 922	75133	7,45 %	-	100%	
Share of recycling and/or certified materials in total glass packaging (% of total weight)	%	24,6%	28,76%	4.16 pts	25%	100%	
Plastic packaging							
Total weight (tonnes) of all plastic packaging	T	63 885	114 252	78,84 %	90 000	100 %	
Recycled plastic content (% of total weight of plastic packaging)	%	69 %	53 %	(16) pts	65%	100%	
Rate of compostable plastic packaging (as a % of total weight of plastic packaging)	%	0	0	-	0	-	
Percentage of plastic packaging recycled (% of total weight of plastic packaging)	%	9 %	16 %	7 pts	15%	-	
Share of recycled plastic packaging of plastic packaging	%	New	23,6	-	-	100 %	
Bulk sales and deposits	M€	195	256	31 %	300m in 2026	91 %	2024: ES deposit

Performance commentary

In 2023, Carrefour achieved its target of reducing cumulative packaging by 20,000 tonnes by 2025. The Group has now constructed a measure of its packaging footprint in different materials, an innovative initiative in the sector, and is pursuing its packaging reduction policy. The Group has achieved a percentage of 56% of recyclable and compostable packaging, below the forecast trajectory. This figure reflects the technical difficulty of recycling certain types of packaging such as flexible hoses, the difficulty of collecting data from smaller suppliers, and the disparity in the performance of sorting and recycling systems in the countries where the Group operates. Total sales from bulk and reuse will amount to €256m in 2024, an increase of +31% compared with 2023, reflecting the efforts made by the Group to develop these models as well as the inclusion of new product categories.

2.3. Action plans

An international packaging working group has been set up to implement the Group's commitments in all countries. It brings together the International Merchandise Department, the Quality Department, the CSR Department and the packaging correspondents in each country.

- Bilateral quarterly calls are organised with each country to review progress on the packaging roadmaps, and to work on methodologies for coordinating the approach at country level and improving the collection of packaging data.
- Collective exchange sessions help to drive the commitments and share best practice between countries. For example, in 2024, the packaging working group enabled Italy, France and Argentina to share feedback on *data-driven* decision-making to define a national trajectory, on the use of a matrix to prioritise plastic reduction projects, and on communication with customers.

A number of resources have been made available to countries to help them put their packaging trajectories into practice:

- the packaging purchasing rules within the purchasing rules for the food transition: which determine the rules in terms of recyclability, and the operational procedures for implementing reduction commitments,
- the "Top Emballages" resource bank distributed to country coordinators: it lists the best packaging practices that already exist on the Private Label or National Brand market, in all product categories, to help buyers make their choices.
- In 2024, to give countries a clearer picture of the types of packaging they put on the market, around thirty new indicators were added to their reporting. This gives the Group an overall view of the types of packaging put on the market in its various countries, and enables it to take action accordingly.

This governance and these tools enable the implementation of the following actions in each country:

1. Elimination of problematic or unnecessary packaging

Carrefour is developing plastic-free aisles in its shops.

By 2023, in all integrated countries, 20,738 tonnes of primary packaging will have been saved since 2017. Carrefour is therefore meeting its target two years ahead of schedule. The main reductions in 2023 relate to concrete projects. Since 2017, in each country, plastic has been eliminated on a product-by-product basis. The biggest single-use plastic elimination projects have included:

- Replacing single-use plastic packaging in various non-food aisles with paper packaging: as a result, the batteries, light bulbs, stationery and tools aisles have been almost completely deplasticized in all of the Group's integrated countries.
- The total replacement of plastic chicken boxes by bags in France and the introduction of kraft boxes for pastries in Spain.
- In France, the work carried out on fruit and vegetables means that 80% of products in this section are sold without packaging.
- The search for more eco-friendly packaging has been extended to grocery, drugstore, perfume and hygiene products: the Soft Green range has been expanded to include a shampoo and a solid soap.

In June 2023, Carrefour took part in drawing up the roadmap on industrial and commercial plastic packaging with (RE)SET, Perifem and the Fédération du Commerce et de la Distribution (FCD). The Group has chosen to implement concrete actions, such as optimising palletising film thicknesses according to product/pallet constraints, reducing the number of references, generalising the use of pre-stretched film, and replacing films and covers.

2. Promoting eco-design, recyclability and recycling

When it becomes difficult to reduce the quantity of packaging and the number of products containing plastic, Carrefour optimises the use and end-of-life of those that remain necessary, by guaranteeing their reuse and recyclability. Eco-design is a way of increasing the recyclability of packaging. This approach is promoted to consumers by means of a logo on all Carrefour-branded recycled, recyclable, reusable or compostable products.

To encourage recycling, Carrefour is focusing on improving collection and sorting. In 2024, Carrefour France had 223 RVMs installed.

The Group is also considering new, more responsible practices for non-market purchases. In line with the EIC roadmap developed with (RE)SET, Carrefour will be testing new solutions such as palletising films and recyclable resin covers (LDPE). A working group of other retailers is being set up to draw up a list of products requiring opaque films and covers, and to share best practice in this area. If the tests are positive, the sector could be aiming for 100% recyclable resin pallet covers and films by 2025.

3. Developing bulk packaging and reuse

Sharing the common objectives of the National Pact on Plastic Packaging, Carrefour intends to test and develop commercial models for re-use, re-employment and bulk sales for product families not yet covered by these models by 2025. Carrefour wants to offer all consumers the possibility of zero waste, whether through a range of products with returnable packaging or by offering bulk products. The bulk offer has been developed in all formats: 685 shops in France have a bulk grocery offer with 85 different references.

In 2023, in all integrated countries, Carrefour achieved sales of €256 million in bulk products and deposits, ahead of its target. The target has been revised to €300 million in bulk sales and re-use by 2026 to take into account the development of re-use. The Group is encouraging the use of reusable packaging through various initiatives in all its regions. In France, Belgium and Poland, for example, the Group is particularly advanced or innovative in terms of packaging reuse.

Since the end of 2023, in all the Group's hypermarkets and supermarkets, the "Bring your container" operation has been raising consumers' awareness of the need to reduce the use of packaging for products bought in the fresh produce sections (fish, butchery, delicatessen, etc). To take this a step further, Carrefour France offers a 10-centime reduction for each product purchased in a customer container if the customer has a loyalty card. Carrefour Spain has also launched hermetically sealed stainless steel packaging as part of its Carrefour Home range of household products.

In France, in partnership with TerraCycle, Carrefour is positioning itself as a forerunner in reuse with the development of Loop by Carrefour. This system allows consumers to return returnable containers, which, once washed, are sent back to suppliers to be reused. Launched in October 2020, the initiative will be effective in 204 shops with 33 references by the end of 2024, and was inaugurated this year in the Toulouse region. In order to accelerate the development of reuse in France, Carrefour also launched the La Consigne par Carrefour project at the end of 2023, which is effective in 150 local shops in Paris and will be extended to south-east France in 2025. Finally, since 2023, Carrefour

has been working with CITEO to build ReUse, a multi-distributor and multi-supplier reuse initiative, in order to structure an interoperable deposit system made up of standard and iconic packaging, which will be inaugurated in May 2025 across the Western and Northern regions. Since 2023, Carrefour has also introduced returnable Drive bags. When customers go to the Drive, they are offered a returnable bag for 35 cents. To recover the 35 cents, they simply return the bags when they make their next Drive order.

In France, the Group is working with (RE)SET to create new re-use solutions for complex packaging formats such as biscuits and salads. As part of the 3R (Reduce, Reuse, Recycle) roadmap, (RE)SET member companies have made a collective commitment to replace the EPS and Plastarch Material (PSM) trays used in butchers and fishmongers with recyclable PP, PE and PET materials. Finally, the Group has launched an operation to reuse the bags used for e-commerce deliveries.

In Belgium, in addition to the re-use of beer references, Carrefour continues to innovate within the Reusable Packaging Coalition. In Poland, Carrefour offers deposits on beer and also encourages them on glass bottles of sparkling water, becoming the first retailer in the market to offer sparkling water in 1-litre glass bottles.

4. Contributing to the circular economy via insurance products

In the insurance products offered to customers, Carma takes into account 3 main areas of the circular economy:

- The repair rate,
- The rate of second-hand parts,
- The rate of reconditioned equipment.

The key actions deployed are as follows:

- "Repair First" principle: Carma now offers its customers the repair of its product as a priority before renewing it.
- Partners' commitment: As part of the subcontracting of claims management, partners are required to respect the "repair first" principle by systematically offering repair to customers before any renewal option. A dedicated team is responsible for maintaining active communication with partners, informing them of the strategy adopted by Carma and ensuring their alignment with this approach. Checks are also carried out to ensure that partners are applying the strategy correctly.
- In order to meet the growing expectations of customers and the CARMA group's contribution to the circular economy, new products are offered to customers such as :
 - insurance for environmentally-friendly means of transport, bicycles and the new individual electric vehicles
 - home insurance cover for renewable energy equipment and technologies

3. Developing the circular economy within operations

3.1. Policy and targets

Policies on the use of resources and the circular economy

As a major player in the mass retail sector, the Group recognises that responsible management of waste and food waste is not only essential to reduce ecological impact, but also to meet the expectations of consumers and stakeholders in terms of sustainable development. With this in mind, the Group's policy is to prevent the production of waste, by combating food waste, and to recover waste from its shops.

For Carrefour, food waste is a major issue, closely linked to the operational efficiency of its activities. The management of shrinkage (unsold products generated in shops as a result of stock management, product conservation, etc.) is essential in order to limit the loss of sales associated with breakage, while the recovery of unsold food and products that are no longer on sale represents an opportunity to reduce the associated losses.

For the management of food and non-food waste, Carrefour participates in the development of sorting and recovery channels in countries where they are regulated. In order to optimise the management of its waste, Carrefour acts in concert with waste recovery players such as cardboard, plastic or organic waste, and implements the following principles:

- **Regular audits:** Carry out waste audits to identify opportunities for improvement in waste management and performance.
- **Measurable targets:** Define and monitor quantified waste reduction targets.
- **Innovation and R&D:** Invest in research, development and innovation to design sustainable solutions that reduce waste.
- **Awareness-raising and training:** Training employees in good waste reduction and management practices.
- **Increased recycling:** Integration of recycling programmes to reduce waste going to landfill.
- **Independent certification:** Have waste management processes certified by an independent body to ensure compliance and efficiency.

With regard to shops, waste management and the fight against food waste, performance is monitored at Group level. In each country, national committees meet every month to monitor shrinkage in shops. These committees bring together the Supply Chain and the Executive, Financial and Organisational Departments of the various formats. At shop level, the Group has introduced the role of "anti-waste referent", with the aim of assigning a person dedicated to this cause in every shop in France. This approach, which is part of the anti-faste referent's mission, is now incorporated into the Cap Formation tool used to train these referents. Not only has this mission been extended to the Group's shops, but it is also offered to franchisees, underlining a collective commitment to reducing food waste at all levels of the company.

Targets relating to the use of resources and the circular economy

Table 4: Targets for developing the circular economy within operations

Target	Unit	Target value	Target year	Scope	Reference value	Reference year
Reduction in food waste	%	50%	2025	Integrated shop group	-10 %	2016
Recycling of shop waste	%	100%	2025	Non-franchise shops	67 %	2020

3.2 Indicators and performance

Table 5: Monitoring key performance indicators for developing the circular economy within operations

Indicator	Unit	2023	2024	Change	Target 2024	Coverage rate	Exclusions
Food loss and waste							
% reduction in food waste	%	(33,8)	(49,7)	(15.9) pts	50% 2025 by	100 %	
Percentage of shop waste recovered (% by weight)	%	70	73	3 pts	100% 2025 in	100 %	
Total weight of food waste and losses	T	122 598	80 075	(34,68) %	100 099	100%	
Total weight of waste produced	T	671 100	681 043	6 %	-	93 %	2024: RO
Total waste recycled/reused	T	468781	546544	17%	-	93 %	2024 : RO
Total waste disposed of	T	202319	134499	-34%	??	93 %	2024 : RO
Hazardous waste diverted from from disposal	T	New	1839	-	-	93 %	2024: RO
Hazardous waste diverted from from disposal due to preparation for re-use	T	New	0	-	-	93 %	2024: RO
Hazardous waste diverted from from disposal due to recycling	T	New	727	-	-	93 %	2024: RO
Hazardous waste diverted from from disposal due to other recovery operations	T	New	1 112	-	-	93 %	2024: RO
Non-hazardous waste diverted from disposal	T	New	544 705	-	-	93 %	2024: RO
Non-hazardous waste diverted from disposal due to preparation for re-use	T	New	12 5870	-	-	93 %	2024: RO
Non-hazardous waste diverted from disposal through recycling	T	New	450 311	-	-	93 %	2024: RO
Non-hazardous waste diverted from disposal due to other recovery operations	T	New	81 807	-	-	93 %	2024: RO

Indicator	Unit	2023	2024	Change	Target 2024	Coverage rate	Exclusions
Hazardous waste for for disposal	T	New	530	-	-	93 %	2024: RO
Hazardous waste for disposal by incineration	T	New	35	-	-	93 %	2024: RO
Hazardous waste destined for landfill disposal	T	New	301	-	-	93 %	2024 : RO
Hazardous waste destined for disposal by other operations elimination	T	New	194	-	-	93 %	2024: RO
Non-hazardous waste for for disposal	T	New	133969	-	-	93 %	2024 : RO
Non-hazardous waste destined for disposal by incineration	T	New	1 833	-	-	93 %	2024: RO
Non-hazardous waste destined for landfill disposal	T	New	127 269	-	-	93 %	2024: RO
Non-hazardous waste destined for disposal by other disposal operations	T	New	48672	-	-	93 %	2024: RO
Percentage of waste not recycled	%	New	34 %	-	-	93 %	2024: RO
Total quantity of hazardous waste	T	New	2 369	-	-	93 %	2024: RO
Waste incinerated without energy recovery	T	131508	1868	(98,58)%	-	93 %	2024 : RO
Waste for which the disposal method is unknown	T	0	0	-	-	93 %	2024: RO
Waste incinerated with energy recovery	T	New	82 919	-	-	93 %	2024 : RO

Performance commentary

The methodology for calculating food waste was overhauled in 2023 and all Carrefour Group entities are now included. Performance is improving in almost all countries thanks to the implementation of action plans. These good results enable Carrefour to come closer to its -50% target. The recovery rate is improving, but more slowly than expected. Spain and Romania do not yet have the necessary hindsight to break down all or part of their waste according to the new CSRD categories. The total quantity of waste not included for these two countries is 68,134 tonnes (100% for Romania, i.e. 56,525 T, 11% for Spain, i.e. 11,609 T), which represents 9.1% of the Group's total waste.

3.3. Action plans

Reduce the amount of shrinkage in shops:

In order to reduce in-store markdowns, corresponding to products withdrawn from sale, solutions are being implemented to improve stock and order management, to promote short shelf life and sell products beyond their minimum durability date, and to promote damaged products:

- Improving stock and order management: shop managers have daily information on markdowns. The Top 40 products are ranked according to value or breakage rate. Fresh produce department managers use¹ sales and production forecasts, which they can adapt according to the weather or external events. In this way, shops can adapt their orders to meet demand as effectively as possible, while minimising markdowns. In this way, they reduce the amount of unsold food that is potentially wasted.

The Carrefour Group has also introduced new digital tools to improve stock management² :

- Carrefour France: For example, the DEAVA tool, which is revolutionising the management of use-by dates. Initially launched in hypermarkets in France in 2022, this tool has been successfully tested in self-service product departments. From early 2024, it will be rolled out to other departments, offering an effective, centralised solution for managing expiry dates. DEAVA incorporates a freshness chart for each product, replacing traditional visual checks with a secure, digital process. In 2024, it will be extended to other sectors such as catering, fishmongers and butchers. The aim is to gradually roll out this tool to all food departments, thereby strengthening the effective management of best-before dates and helping to reduce food waste on a large scale.
- Carrefour Brazil: The adoption of the ClicData solution by Carrefour's Brazilian subsidiary has improved stock management and contributed to a significant reduction in food waste. With more than 1,200 shops across the country and working with more than 440 major suppliers, Carrefour faced a huge data management challenge. Thanks to ClicData, Carrefour has been able to provide its suppliers with a detailed view of sales performance and stock levels, enabling them to plan their replenishments more effectively. By providing accurate reports on sales, stock levels and integrated forecasting tools, Carrefour has been able to minimise stock-outs and the costs associated with surpluses, while helping to combat food waste.

Finally, to combat food waste through its inventory management, since 2023 the Group has implemented a strategic initiative to extend the minimum durability

¹ a planning tool that forecasts and monitors sales trends over a given period

² Example in Brazil: <https://www.clicdata.com/fr/blog/carrefour-bresil-optimize-la-gestion-de-stocks-grace-la-data/>

dates (MDD) of its products. This approach aims to reduce waste by allowing consumers to use products for longer without compromising their quality or safety. Carrefour has therefore identified the possibility of extending the 30-day period to 90 days for certain essential products such as liquids, grocery products, frozen foods and food preparation accessories, thereby giving consumers more room for manoeuvre. Similarly, the best-before date for bottled fruit juices, nectars and mixes has been extended from 30 days to 60 days, allowing for better stock management and a significant reduction in wastage.

- Promoting short shelf life and selling products until at least beyond the best before date: in-store, Carrefour offers -30% to -60% on short shelf life products. A specific process using a ZEBRA, a barcode scanner-type device used for stock management and inventory, which enables labels to be printed in-store and promotes stock clearance. Carrefour also sells a specific list of products that are past their sell-by date but can still be consumed, in a dedicated, signposted aisle header. The project has been rolled out to all hypermarkets and supermarkets in France since 2020. Internal tools are used to go even further: alerts on stocks at risk of breakage are sent every week to all shop directors and managers in order to prevent the risk of breakage and trigger actions in shop to dispose of the stock. These alerts exist for both ultra-fresh products and the grocery and liquid sections. In-store staff are trained in anti-gaspi issues and actions to implement on a daily basis are made available on Cap Formation.
- promoting Zéro Gaspi baskets: Carrefour has also rolled out its Zéro Gaspi baskets in fruit and vegetable sections. These baskets contain fruit and vegetables that do not meet the usual aesthetic or presentation criteria (for example, products that are a little damaged, of irregular size or in overstock) but which are still perfectly edible. The aim of these baskets is to reduce food waste by enabling consumers to buy these products at a reduced price. In addition to this, this approach helps to raise customer awareness of the importance of combating food waste and of accepting products that are just as good to eat, even if they do not meet the standards of beauty often demanded by traditional departments. In addition, Carrefour is continuing its action via the Too Good To Go application, which offers baskets of unsold food products at low prices. In 2024, 3,558,313 Too Good To Go baskets were sold in Europe;
- Promoting damaged but healthy products: since 2021, Carrefour France has set up "zero waste challenge" units in 30 of its shops: they hold intact eggs from damaged or soiled boxes, sold in bulk at reduced prices. To avoid losing healthy fruit and/or vegetables packaged in trays, nets or bags and withdrawn from sale because one or two products have spoiled, a "zero waste" repackaging system has been set up in all its shops. In the same spirit, Carrefour Spain is offering a 25% reduction on the price of vegetables that are damaged but still edible. This initiative limits waste while allowing customers to enjoy products of unrivalled taste quality at a lower cost.

Finding innovative solutions to reduce unsold food:

Thanks to partnerships with innovative suppliers:

- NOUS ANTI GASPI: in France, Carrefour wanted to change the retail codes by offering the exclusive NOUS anti-gaspi brand in its hypermarkets. Sold at up to 20% lower prices, the NOUS anti-gaspi range includes a number of fresh everyday products, some of which are organic, and all of which are manufactured either in

France or in their historical region. 35 products are sold in over 1,114 shops. In 2024, more than 930,969 products were sold. Helios: in Spain, Carrefour has launched a new product to combat food waste: jam made from fruit that is ripe but still of unaltered quality. This measure, a pioneer in the sector, is being carried out in collaboration with the company Helios, and is part of Carrefour's Zero Food Waste policy.

- Helios: In Spain, Carrefour has launched a new product to combat food waste: jam made from ripe fruit whose quality remains intact. This measure, a pioneer in the sector, is being carried out in collaboration with the company Helios, and is part of Carrefour's Zero Food Waste policy.

Recovering food waste:

The Group's priority is to reduce unsold food to minimise the production of waste. When unsold food cannot be avoided, the Group deploys solutions to recycle the food that is no longer available for sale:

- optimising donations to charities: in 2024, the quantity of donations increased to almost 61 million meal equivalents donated worldwide. The donations were distributed to food aid associations such as the Banque alimentaire and Resto du Cœur in France. With this in mind, every morning, shop teams sort the products they remove from the shelves: this sorting process directs unsold products that are healthy and eligible for donation to local food aid associations;
- Recovery of bio-waste: in France, unsold food that cannot be donated to associations is transformed into biomethane (a renewable gas produced from waste), which is used by Carrefour trucks running on biomethane to transport goods. The production of 1 tonne of biomethane enables a truck to travel 250 kilometres.

Recovering non-food waste:

In every shop operated by the Group, Carrefour works with its suppliers to prevent the production of waste linked to packaging and point-of-sale advertising. It promotes sorting and recovery through innovative solutions such as :

- pooling collections from different sorting channels,
- reducing over-packaging through reuse,
- developing new channels for recycling and re-using products,
- digitalising customer communications.